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ROYAL BOTANIC GARDENS, KEW

LI.—THE CORRECT SPELLING OF CERTAIN GENERIC NAMES—III.* T. A. SPRAGUE.

The interpretation of the International Rules of Nomenclature (ed. 2, 1912), in so far as they concern the spelling of generic names, offers a series of problems which have been solved by different botanists in different ways, with the result that there are hundreds of generic names the correct spelling of which is in dispute. A single illustration may suffice : in Communication no. 7, p. 28 (May 1926) of the International Seed Exchange publications, issued by the Brooklyn Botanic Garden, a list is given of twenty-one very frequently used generic names of cultivated plants,† which are currently spelt by adherents of the International Rules in two (or more) different ways. Adherents of the American Code are faced with similar problems.

As part of the necessary preparatory work in nomenclature for the International Botanical Congress to be held at Cambridge, England, in 1930, an attempt has accordingly been made by the writer to ascertain the precise meaning of the Rules in question, and to determine in accordance therewith the correct spelling of over 120 generic names and homonyms including the twenty-one mentioned above. The number of orthographic variants of these names exceeds 300. For convenience of reference the names are arranged alphabetically. Where one of the names discussed has been applied to two or more genera, the several homonyms are arranged, however, not in strict alphabetical but in chronological sequence, preceded by the figures (1), (2), etc., as in the case of (1) *Bradlea* (2) *Bradlaeia* (3) *Bradleja* (4) *Bradleya*. The correct spelling is indicated by heavy black type, synonyms following in italics.

The principal articles dealing with the spelling of generic names are the following :‡

Art. 7. Scientific names are in Latin for all groups. When taken from another language, a Latin termination is given them, except in cases sanctioned by custom. . . .

* Continued from *K.B.* 1928, p. 296.

† *Annona, Borago, Euonymus, Furcraea, Haloragis, Jussiaea, Maianthemum, Mesembryanthemum, Osmorhiza, Penstemon, Pereskia, Prunella, Pyrola, Pyrus, Raphanus, Stuartia, Swertia, Symphoricarpos, Thuja, Thujopsis, Zanthoxylum.*

‡ In case of any doubt as to the meaning of the English and German translations, the French text is to be accepted as authoritative (Internat. Rules, ed. 2, p. vi.). A few slight verbal changes are here made in the English text.

Art. 19. Botanical nomenclature begins for the different groups of plants (recent and fossil) at the following dates.

(a) Phanerogamae and Pteridophyta, 1753 (Linné, Species Plantarum, ed. 1). . . .

It is agreed to associate genera, the names of which appear in Linné's Species Plantarum, ed. 1, with the descriptions given of them in the Genera Plantarum, ed. 5 (1754).

Art. 20. However, to avoid disadvantageous changes in the nomenclature of genera by the strict application of the rules of nomenclature, and especially of the principle of priority in starting from the dates given in Art. 19, the rules provide a list of names which must be retained in any case. These names are by preference those which have come into general use in the fifty years following their publication, or which have been used in monographs and important floristic works up to the year 1890.*

Art. 24. Genera receive names, which are substantives (or adjectives used as substantives) in the single number and written with a capital letter, and which may be compared with our surnames. These names may be taken from any source whatever, and may even be composed in an absolutely arbitrary manner.

[*Art.* 37. A species or a subdivision of a species, announced in a work with a complete specific or varietal name, but without diagnosis or reference to a former description under another name, is not effectively published. Citation in synonymy or incidental mention of a name is not effective publication, and the same applies to the mention of a name on a ticket issued with a dried plant without printed or autographed diagnosis.

Plates accompanied with analyses are equivalent to a description; but this applies only to plates published before January 1, 1908.]

Art. 38. A genus . . . named or announced without being characterized conformably to article 37 cannot be regarded as effectively published (*nomen nudum*). The mere indication of species as belonging to a new genus . . . does not allow us to accept the genus . . . in question as characterized and [the generic name as] effectively published. An exception is made of the generic names mentioned by Linné in Species Plantarum, ed. 1, 1753, which it is agreed to associate with the descriptions in Genera Plantarum, ed. 5, 1754 (see Art. 19).

Art. 39. The date of a name . . . is that of its effective publication.

Art. 40. For the indication of the name . . . of a group to be accurate and complete . . . it is necessary to cite the author who first published the name . . . in question.

Art. 50. No one is authorized to reject, change or modify a name . . . because it is badly chosen or disagreeable or because another is preferable or better known. . . .

*As explained under *Maianthemum* (p. 356), the particular *spelling* used in the list of conserved names is not necessarily conserved, as that list was drawn up directly from Dalla Torre et Harms, Genera Siphonogamarum, in which numerous unauthorised "corrections" were made.

Examples.—This rule was broken when *Staphylea* was changed to *Staphylis*, *Tamus* to *Thamnos*, *Mentha* to *Minthe*, *Tillaea* to *Tillia*, *Vincetoxicum* to *Alexitoxicon*.

Art. 57. The original spelling of a name must be retained, except in the case of a typographic or orthographic error. When the difference between two names, especially between two generic names, lies in the termination, these names are to be regarded as distinct, even though they differ by one letter only. [Orthographic variants, however, such as *Columella* and *Columellia*, or *Eschweilera* and *Eschweileria*, are not regarded as distinct names : see footnote to Rec. XXXI.]

Examples of different names. *Rubia* and *Rubus*, *Monochaete* and *Monochaetum*, *Peponia* and *Peponium*, *Iria* and *Iris*.

Rec. XXX. Restraint should be exercised in making orthographic corrections, particularly if the change affects the first syllable, and above all the first letter of a name.*

Rec. XXXI. Many names differ only by a single letter, without any risk of confusion arising (ex. *Durvillea* and *Urvillea*). In cases where a close approach to identity might be a source of error (ex. *Astrostemma* and *Asterostemma* in one and the same family, Asclepiadaceae, *Pleuripetalum* and *Pleuropetalum* in Orchidaceae), only one of the names (the older) should be retained in accordance with Art. 51, 4°.†

It should be noted that Art. 7, which states that scientific names are in Latin, and that when taken from another language, a Latin termination is given them, is not a " rule " but a " guiding principle." The " rules " are Art. 10-58 (see Art. 2). Reference to Art. 24 shows that generic names may be composed in an *absolutely arbitrary manner*, and Art. 57 states that no one is authorized to change or modify a name because it is badly chosen or because another is preferable. Hence the Rules do *not* allow the replacement of a Greek termination by a Latin one : *Symphoricarpos* must not be altered to *Symphoricarpus*, nor *Phoradendron* to *Phoradendrum*. The generic name *Manihot*, cited as valid under Art. 24, is neither Latin nor latinized, nor is *Quamoclit*. It is evident that Art. 7 is of the nature of a recommendation, not of a rule. Names or forms of nomenclature contrary to a recommendation cannot be rejected (Art. 2).

Disregard of the essential difference between rules and recommendations has led to all kinds of unauthorized orthographic

* The wording, both of the original French text and of the English translation, might suggest that botanists were at liberty to make what orthographic corrections they pleased, whereas it is only in comparatively few cases that such corrections may be made under the Rules (see pp. 339–340).

† This is an application of the general principle that names which might lead to confusion or error must be rejected (Art. 51). Thus of the four generic names dedicated to Richard Bradley (*Bradlea*, *Bradlaeia*, *Bradleja* and *Bradleya*) only one can be retained, namely the earliest, *Bradlea*, since each of them has been spelt both as *Bradleya* and *Bradleia*.

" corrections " of generic names being accepted by botanists. A generic name may not be altered under the Rules on the ground that it is a *nomen hybridum* (e.g. *Rupicapnos*, from rupes and καπνὸς) nor because it is badly formed (e.g. *Stigmaphyllon*, which should have been *Stigmatophyllon* or *Stigmatophyllum*), nor because it is a corrupted form of a classical word (e.g. *Tamus* for *Thamnos* or *Tamnus*, an example cited under Art. 50), nor because it is telescoped (e.g. *Penstemon*, which should have been *Pentastemon*) or curtailed (e.g. *Richardia* for *Richardsonia*), or has a wrong connecting vowel (e.g. *Chimaphila* for *Chimophila*), nor because an initial aspirate is omitted in latinizing a Greek word (e.g. *Aplophyllum* for *Haplophyllum*). Many botanists use such forms as *Fourcroya, Jussieua, Vaillantia*, because these genera were named in honour of Fourcroy, Jussieu and Vaillant respectively. But the original spellings *Furcraea, Jussiaea* and *Valantia* must be retained under Art. 24, although they are not in accordance with Rec. IV.

For this misunderstanding the wording of Art. 57 and Rec. XXX. seems to be primarily responsible. The correction of typographic and orthographic errors is permitted under Art. 57, but no definition of an orthographic error is given. The only serious difficulty connected with the correction of *typographic* errors lies in the fact that it is often difficult to prove that an error occurred in printing. In the cases of *Kissenia* and *Saurauia* the spellings *Fissenia* and *Saurauja* may be rejected as containing typographical errors, because these generic names not only commemorate Kissen and Saurau, but were actually written *Kissenia* and *Saurauia* respectively by Robert Brown and Willdenow, who proposed the names in question.

When Art. 57 is read in conjunction with Art. 24 and Art. 50 it seems clear that the *orthographic* corrections permitted do not include such as are based *solely* on *philological* grounds. It is very regrettable that so many badly formed names or corrupt spellings of classical names should have been published for genera, but Art. 50 expressly forbids the changing or modification of such names. The reason for this provision is not far to seek : authorities such as Ascherson, St. Lager, Dalla Torre and Harms, and Post and Kuntze, frequently disagree as to what the philologically " correct " spelling should be—hence it was considered advisable to retain the original spelling in such cases. The only orthographic errors that may be corrected are such as are *unintentional*.

If the views expressed above represent a correct interpretation of the International Rules, it is obvious that the cases in which typographic or orthographic corrections may be made are relatively few. The ten examples given in the following list are: *Acanthephippium, Argithamnia, Bejaria, Beurreria*, (4) *Bradleya, Kissenia, Malcolmia*, (2) *Matthiola, Saurauia, Stuartia*. These form about 8 per cent. of the names discussed; and two of them, *Malcolmia* and *Matthiola*, are on the border-line.

It seems desirable to draw special attention to the question whether spellings of generic names published in Species Plantarum, ed. 1 (1753) have precedence over different spellings of the same names published in Genera Plantarum, ed. 5 (1754). Dr. Hans Schinz and the late Dr. A. Thellung have taken the view that the spellings published in Sp. Pl. ed. 1 (1753) must be adopted, owing to the rule (Art. 38) under which such names are accepted as dating from 1753, and are associated with the descriptions published in Gen. Pl. ed. 5 (1754). The writer, on the other hand, considers that the generic names common to these two works are treated as published in 1753, but that neither the one work nor the other was intended to have priority as regards the spelling of generic names. This question is discussed at some length under *Euonymus* (p. 294). Since then the case of *Thuja* has been investigated: in this Linné subsequently to 1753-54 appears to have consistently adopted one of the spellings. In the writer's opinion such cases should be settled by the following considerations:

1. If Linné subsequently to 1753-54 consistently adopted one of the spellings, that spelling should be accepted, e.g. *Thuja*.

2. If not, the spelling which is more correct philologically should be adopted, e.g. *Agrostemma*.

3. Of two spellings which are equally correct philologically, the one which is (a) in accordance with the recommendations, or (b) is more commonly used, should be adopted, e.g. *Ludwigia*.

In conclusion, it may be pointed out that it is often very difficult to ascertain what authors first published particular variants of generic names, so that earlier citations may possibly be found for some of the names in the following list. Pfeiffer's Nomenclator Botanicus (1873-74) is nearly exhaustive for names published up to the end of the year 1858. For those published since that date the Index Kewensis and its Supplements, Dalla Torre and Harms, Genera Siphonogamarum, and Post and Kuntze, Lexicon Generum Phanerogamarum, may be consulted.

It is hoped that the publication of the present paper may lead to a satisfactory solution of this vexed question, and that the numerous examples discussed may enable other workers to determine the correct spelling of particular generic names with less difficulty than heretofore.

Acanthephippium *Endl.* Gen. Pl. i. 200 (1837); Blume, Orchid. i. 156 (1858). *Acanthophippium* Blume, Bijdr. 353, 433, Clav. Gen. Orch. Jav. fol. 5, t. 47 (1825); Blume, Orchid. i. t. 49, fig. 1 (1858). —Since the spelling *Acanthophippium* contains a definite (and apparently *unintentional*) orthographic error, namely, the omission of the initial letter of ephippium (a saddle) and the alteration to *Acanthephippium* involves no risk of confusion or error, the latter spelling should be adopted.

Achillea *L.* Sp. Pl. ed. 1, 896 (1753); L. Gen. Pl. ed. 5, 382 (1754). *Achillios* St. Lager in Ann. Soc. Bot. Lyon, vii. 82, 118 (1880).—From the point of view of the classical scholar, the form proposed by St. Lager is doubtless preferable, since it corresponds with ἀχίλλειος. Under Art. 50, however, *Achillea* must be retained.

Acokanthera *G. Don* Gen. Syst. iv. 485 (1837). *Acocanthera* Endl. Gen. ii. 1404 (1841). *Akokanthera* Walp. Rep. iii. 122 (1845).—As it is quite possible that the eccentric spelling *Acokanthera* was deliberately chosen by G. Don, it should be retained.

Aeranthes *Lindl.* in Bot. Reg. x. t. 817 (1824). *Aeranthus* Spreng. Syst. iii. 718 (1826).—There is no error whatever in the original spelling *Aeranthes*, and Sprengel was not justified in changing it. The adjectival ending -anthes is used in numerous accepted generic names such as *Menyanthes* and *Spilanthes*. The fact that Lindley subsequently (Orch. Gen. et Sp. 243: 1833) accepted Sprengel's alteration of the spelling is immaterial under Art. 50. If Lindley had intended to publish the name in the form *Aeranthus* and it had appeared by accident as *Aeranthes*, the case would have been different. As the name *Aeranthes* was chosen to correspond with *Aerides*, and occurs seven times in the original place of publication, there can be no question of an accidental mis-spelling.

Aerva *Forsk.* Fl. Aegypt.-Arab. 170 (1775). *Aerua* Juss. Gen. 88 (1789).

Agropyron *J. Gaertn.* in Nov. Comm. Petrop. xiv. pars 1, 539 (1770). *Agropyrum* Roem. et Schult. Syst. ii. 750 (1817). *Agriopyrum* E. H. L. Krause in Bot. Centralbl. lxxiii. 339 (1898)—vide Schinz et Thell. in Vierteljahrsschr. Nat. Ges. Zürich, liii. 522 (1909).

Agrostemma *L.* Sp. Pl. ed. 1, 435 (1753). *Agrostema* L. Gen. Pl. ed. 5, 198 (1754).—Of the two spellings used by Linné in 1753-54 *Agrostemma* should be adopted as it is more correct, the second half of the name being στέμμα, a garland.

Ailanthus *Desf.* in Mém. Acad. Sc. Par. 1786, 265, t. 8 (1788). *Aylantus* Juss. Gen. 373 (1789). *Aylanthus* Vent. Tabl. iii. 450 (1799). *Ailantus* DC. in DC. Prodr. ii. 88 (1825).—vide p. 286.

Aira *L.* Sp. Pl. ed. 1, 63 (1753); Gen. Pl. ed. 5, 31 (1754). *Aera* Aschers. Fl. Brandenb. 830 (1864).

Alchemilla *L.* Sp. Pl. ed. 1, 123 (1753); Gen. Pl. ed. 5, 58 (1754). —Ascherson and Graebner (Syn. Mitteleur. Fl. vi. Abt. 1, 385: 1902) adopted the original pre-Linnean spelling *Alchimilla** used by Hieronymus von Braunschwyg, Buoch von distillierung, fol. cxiii, recto (1515), Tragus Comm. ii. 511 (1552), and Tournefort, Élem.

* Restored by Ascherson, Fl. Brandenburg, 935, Berichtig. zu S. 196 (1864).

408, t. 289 (1694). Briquet, Prodr. Fl. Corse, ii. 199 (1913) has pointed out that the Linnean spelling must be retained under Art. 50.

Aldrovanda *L.* Sp. Pl. ed. 1, 281 (1753) ; Gen. Pl. ed. 5, 136 (1754). *Aldrovandia* Post et Kuntze, Lexic. Gen. Phan. 17 (1903).—Monti is stated to have published the generic name as *Aldrovandia*, and he used that form in his ' Indices Botanici,' 3 (1753). Aldrovandi's name was, however, latinized " Aldrovandus " in his posthumously published ' Dendrologiae . . . libri duo,' and Linné in 1753-54 adopted the spelling *Aldrovanda* in preference to *Aldrovandia*. His decision cannot be reversed.

Allophylus *L.* Sp. Pl. ed. 1, 348 (1753) ; Gen. Pl. ed. 5, 164 (1754). *Allophyllus* Gled. Syst. 82 (1764).—There was no orthographic or typographic error in *Allophylus*. Linné (Phil. Bot. 186 : 1751) derived it from " ἀλλόφυλος, alienigenus." The alteration to *Allophyllus* may have been due to a mistaken idea that the second part of the name was from φύλλον, a leaf. This illustrates one of the dangers attending orthographic " corrections."

Amaranthus *L.* Sp. Pl. ed. 1, 989 (1753) ; Gen. Pl. ed. 5, 427 (1754). *Amarantus* L. Syst. ed. 10, 1268 (1759)—vide p. 287.

Amethystea *L.* Sp. Pl. ed. 1, 21 (1753). *Ametystea* L. Gen. Pl. ed. 5, 13, (1754)—vide p. 295.

Ammannia *L.* Sp. Pl. ed. 1, 119 (1753) ; Gen. Pl. ed. 5, 55 (1754). *Ammania* Scop. Introd. 209 (1777) ; Houst. in Reliq. Houst. 4 (1781).—The spelling originally used by Houston and adopted by Scopoli was *Ammania*, but Linné published it in the form *Ammannia*. The generic name was evidently associated by Linné with Johann Amman (1707-1741), Professor of Botany at St. Petersburg, who was a contributor to the Linnean Herbarium (B. D. Jackson, Index Linn. Herb. 9 : 1912). Under *Ammannia latifolia* L. Sp. Pl. ed. 1, 119, is the synonym *Ammannia palustris, caule quadrangulari, foliis angustis* Amm. Herb. 344. That this refers to Johann Amman, who wrote on Ruthenian botany, is evident from the entry in the list of Auctores usitatiores : " Amanni [sic] *Ruthenica, Herbarium.*"

Johann Amman spelt his name as " Amman " (Stirp. Rar. Ruthen. Ic. et Descr., dedicatory epistle, and preface), and latinized it as " Ammanus." Linné spelt both Johann Amman and Paul Ammann (1634-1691) as " Amman " (Biblioth. Bot. 146, 207, and Index auctorum : 1751) and latinized Paul Ammann's name as Ammannus. (" Paulus Ammannus," l.c. 109, 116, 123, 175). In 1753 he latinized Johann Amman as " Ammannius " or " Ammannus " (Sp. Pl. ed. 1, 119 ; " Amannus " in list of Auctores usitatiores). Subsequently, however, he had " Ammanus, J." (Sp. Pl. ed. 2, Auctores restauratores).

Haller (Biblioth. Bot. i. 518, ii. 291), like Linné, spelt both Paul and Johann as "Amman," whereas Pritzel (Thes. Lit. Bot., ed. 2, 5), and the British Museum (Nat. Hist.) Library Catalogue have both as "Ammann." In these circumstances the original spelling *Ammannia* should be retained. It seems probable that Linné intentionally doubled the "n" in Amman's name, when he latinized it. In any case he actually used the form *Ammannia* throughout the period 1737-71.

Androsace *L.* Sp.Pl. ed. 1, 141 (1753); L. Gen. Pl. ed. 5, 69. (1754). *Androsaces* Aschers. Fl. Brandenburg, 555 (1864).—Although the classical ἀνδρόσακες should be transliterated *Androsaces*, the name *Androsace* adopted by Linné for a genus of Primulaceae cannot be altered under the Rules.

Angraecum *Bory*, Voy. i. 359 (1804), in adnot. *Angrecum* Pfitzer in Engl. et Prantl, Nat. Pflanzenfam. ii. Abt. 6, 214 (1889).—*Angraecum* was derived from angrec (angrek, anggrek, anggerik), the Malay name for orchid. Bory doubtless considered that it was a better latinized form of angrec than *Angrecum*. Under the Rules the spelling published by him must stand.

Annona *L.* Sp. Pl. ed. 1, 536 (1753); Gen. Pl. ed. 5, 241 (1754). *Anona* Boehm. in Ludwig, Def. Gen. Pl. 377 (1760).—The form *Annona* must be retained because it was *deliberately* chosen by Linné to replace *Anona* Comm. (Hort. i. 133, t. 69 : 1697) on the ground that the latter was a "barbarous" name, being of native American origin. By the addition of an "n" he turned it into a classical Latin word (Hort. Cliff. 222 : 1737; Phil. Bot. 163 : 1751). Linné's action in rejecting the euphonious and historic name *Anona* for the inept one *Annona* may be regretted (vide Journ. Bot. 1921, 158), but it cannot be reversed under International Rules, except by conserving the spelling *Anona*. *Annona* has been accepted by Safford (Journ. Wash. Acad. Sc. i. 118 : 1911), and by Fawcett and Rendle (Fl. Jam. iii. 194 : 1914).

Anthericum *L.* Sp. ed. 1, 310 (1753); Gen. Pl. ed. 5, 146 (1754). *Anthericus* Aschers. Fl. Brandenb. 727 (1864).

Aplolophium *Cham.* in Linnaea, vii. 556 (1832). *Haplolophium* Endl. Gen. 712 (1839).—The name of the genus stands as *Aplolophium*. Under Art. 24, 50 and 57, Endlicher was not at liberty to change the spelling.

Aplopappus *Cass.* in Dict. Sc. Nat. lvi. 168 (1828). *Haplopappus* Endl. Gen. 385 (1837).—Although it is regrettable that Cassini did not adopt the spelling *Haplopappus*, it is not permissible under Art. 24, 50 and 57 to alter the name *Aplopappus* published by him.

The name is included among the nomina generica conservanda as "*Haplopappus* Cass.", which is inaccurate. As in the cases of *Epifagus* (q.v.), *Iochroma* and *Maianthemum* (q.v.) there is no evidence

that it was intended that the "corrected" spellings, namely *Haplopappus*, *Epiphegus*, *Jochroma*, and *Majanthemum*, which were copied directly from Dalla Torre et Harms, Genera Siphonogamarum, should be conserved. It is inconceivable that the beautiful and philologically correct name *Iochroma* should have been conserved under the horrible guise of "*Jochroma*."

Since the philologically preferable spelling *Haplopappus* is widely current, however, and is being adopted in H. M. Hall's 'The genus Haplopappus: a phylogenetic study in the Compositae' (Washington, 1928), it seems desirable that it should be definitely conserved. This may be effected by citing the conserved name as "*Haplopappus* Cass. corr. Endl. Gen. 385 (1837)," or by indicating in some other way that Cassini's spelling was corrected by Endlicher.

(1) Aplophyllum *Cass.* in Dict. Sc. Nat. xxxiii. 463, 472 (1824). *Mutisia* sect. *Aplophyllum* Less. in Linnaea, v. 273 (1830). *Mutisia* subgen. *Aplophyllum* Less. Syn. Comp. 107 (1832). *Mutisia* subgen. *Haplophyllum* Endl. Gen. 484 (1838). *Mutisia* sect. *Haplophyllion* Reichb. Nomencl. 88, n. 3436 (1841).—Whether as a genus, a subgenus, or a section this group must retain the name *Aplophyllum*, originally given it by Cassini (as a genus), and subsequently adopted by Lessing (as a sectional or subgeneric name).

(2) Aplophyllum *A. Juss.* in Mém. Mus. Par. xii. 464 (1825). *Haplophyllum* Reichb. Handb. 282 (1837); Reichb. Nomencl. 196, n. 7493 (1841).—The existence of the valid prior homonym *Aplophyllum* Cass. (Compositae) precludes the use of *Aplophyllum* Juss. (Rutaceae) or of its variant *Haplophyllum* Reichb. As the name *Haplophyllum* Reichb. is in common use, however, it may perhaps be considered desirable to conserve it, in view of the fact that *Aplophyllum* Cass. is generally regarded as no more than a section of *Mutisia*.

Archytaea *Mart.* Nov. Gen. i. 117 (1824). *Architaea* Mart. l.c. 116, t. 73.—The spelling *Archytaea* should be retained, as the name commemorates the Greek philosopher Archytas.

Argithamnia *Swartz*, Fl. Ind. Occ. i. 335 (1797). *Argythamnia* P. Browne, Jam. 338 (1756); Adans. Fam. ii. 355 (1763). *Argitamnia* Adans. l.c. 520. *Argothamnia* Spreng. Anleit. ed. 2, ii. 369 (1817). *Argyrothamnia* Muell.-Arg. in Linnaea xxxiv. 144 (1865).—There can be little doubt that Patrick Browne intended to give a name meaning "white shrub," and that the spelling *Argythamnia* was an unintentional orthographic error on his part for *Argithamnia*. Adanson, from whom some authors consider that the effective publication of the name dates, spelt it either with a "y" or an "i". Hence the form *Argithamnia* adopted by Swartz (1797) may be accepted as embodying an orthographic correction such as is warranted under Art. 57. It has been adopted by Pax in Engl. Pflanzenreich, IV. 147, vi. 78 (1912).

(1) Aristotela *Adans.* Fam. ii. 125 (1763).—A superfluous name (nomen abortivum) for *Othonna* L. (1753). Hence it does not invalidate *Aristotelia* L'Hérit.

(2) Aristotelia *L'Hérit.* Stirp. ii. 31, t. 16 (1784). *Aristotela* Gmel. Syst. 751 (1791). *Aristotelea* Spreng. Gen. i. 393 (1830).—The original spelling *Aristotelia* stands.

Aspidopterys *A. Juss.* in Ann. Sc. Nat. sér. 2, xiii. 266 (1840). *Hiraea* sect. *Aspidopteris* Reichb. Nomencl. 206 (1841). *Aspidopteryx* Hassk. Cat. Pl. Hort. Bogor. ed. 2, 223 (1844). *Aspidopteris* Niedenzu in Engl. et Prantl, Nat. Pflanzenfam. iii. Abt. 4, 53 (1890).—A. Jussieu *deliberately* adopted the termination -ys, as in the cases of *Brachypterys*, *Diplopterys*, *Echinopterys*, *Lophopterys* and *Ryssopterys*. Therefore the spelling of these names cannot be changed under the Rules.

Asplenium *L.* Sp. Pl. ed. 1, 1078 (1753); Gen. Pl. ed. 5, 485 (1754). *Asplenum* Aschers. Fl. Brandenb. 913 (1864).

Aubrieta *Adans.* Fam. ii. 420, 523 (1763). *Aubrietia* DC. in Mém. Mus. Hist. Nat. Par. vii. 232 (1821). *Aubretia* Dietr. Syn. iii. 629, 637 (1843).

Balduina *Nutt.* Gen. ii. 175 (1818). *Baldwinia* Torr. et Gray, Fl. N. Am. ii. 388 (1843).—It seems probable that Nuttall latinized Baldwin's name as 'Balduinus' and *intentionally* published the generic name in the form *Balduina*. If this is agreed, it follows that that spelling must be retained. Nuttall's 'Genera' admittedly contains numerous orthographic or typographic errors such as "*Similax*" (ii. 237) for *Smilax*, "Eratum" for Erratum, "*Vaegelia*" for *Vogelia*, and "*Bruchmannia*" for *Beckmannia*. The last two are corrected in the "Eratum", and "*Similax*" was correctly indexed as *Smilax*. In spite of the existence of these errors, however, it can hardly be supposed that in publishing a *new* generic name he could have written, or let pass in proof, *Balduina*, if he had intended to spell it as *Baldwinia* or *Baldwynia*. In a footnote he dedicates the genus to William Baldwyn [sic].

Ballota *L.* Sp. Pl. ed. 1, 582 (1753); Gen. Pl. ed. 5, 253 (1754). *Ballote* Adans. Fam. ii. 192 (1763).—The Greek plant-name βαλλωτὴ was transcribed *Ballote* by Pliny: "Balloten alio nomine porrum nigrum Graeci vocant." (Nat. Hist. ed. Harduinus, ii, 427, l. 3). Hence it might have been better if Linné had adopted that form. His choice of *Ballota*, however, is final.

Barbarea *R. Br.* in Ait. Hort. Kew. ed. 2, iv. 109 (1812). *Barbaraea* Link, Enum. ii. 164 (1822).—The generic name *Barbarea* was taken by Robert Brown without alteration from the Linnean trivial name of his type-species, *Barbarea vulgaris* (*Erysimum Barbarea* L.) The historic origin of the name in its Latin dress was *S[anctae] Barbarae Herba* Fuchs, Hist. 745 (1542), *Herba S. Barbarae* Tragus

Stirp. ed. Kyber 101 (1552) ; and the philologically correct form is undoubtedly *Barbaraea*, which is also in accordance with Rec. IV a. The spelling *Barbaraea* appeared in Dodoens, Cruydeboeck, 668, 669 (1554), but *Barbarea* is given in the ' Index appellationum . . . quibus passim officinae pharmacopolorum et nostri temporis Herbarii utuntur.' In 1583, however, Dodoens (Pempt. 699) accepted the spelling *Barbarea*, with the following remark, " Germani Sant Barberen [sic] kraut nominant, Latine Barbaream idcirco vocavimus," which suggests that *Barbarea* may have been derived from the German ' Barbarenkraut ' instead of directly from the Latin name Barbara. The form *Barbarea* was used also by Lobel, Obs. 104 (1576), Gerarde, Herball 188 (1597), C. Bauhin, Pinax. 98 (1623), J. Bauhin, Hist. ii. 868 (1651), Tabern. Kraeutter-Buch 843 (1664), Chabr. Sciagr. 278 (1666), Moris. Hist. ii. 230 (1680), Mentzel, Index, 44 (1682), Ray, Hist. i. 809 (1686), Weinmann, Phyt. i. 130 (1737) ; the form *Barbaraea* on the other hand seems to have fallen into complete disuse until it was revived in 1822 by Link. The generic name *Barbaraea* has been erroneously attributed to Beckmann, Lexicon Botanicum, 33 (1801), but the word as it appears in that work is a *specific epithet* coupled with the generic names *Erysimum* and *Sisymbrium*.

Under Art 24 and 50, Robert Brown was at liberty to use the Linnean specific epithet, and pre-Linnean generic name, *Barbarea*, for his new genus, and no alteration on philological grounds is permissible.

Bartsia *L.* Sp. Pl. ed. 1, 602 (1753) ; Gen. Pl. ed. 5, 262 (1754). *Bartschia* Wettst. in Engl. et Prantl, Nat. Pflanzenfam. iii, Abt. 3 B, 102 (1893)—vide Schinz et Thell. in Bull. Herb. Boiss. sér. 2, vii. 340 (1907).

Bejaria *Zea ex Vent.* Jard. Cels. sub t. 51 (1800) ; Zea in Anal. Cienc. Nat. iii. 151 (1801), in nota. *Befaria* Mutis ex L. Mant. ii. 152 (1771).—The genus was named *Bejaria* by Mutis in honour of José Bejar, Professor of Surgery at Cadiz. The spelling *Befaria* contains an *unintentional* orthographic error, and should therefore be corrected. Had Linné *deliberately* changed *Bejaria* to *Befaria*, his original spelling could not have been altered under the Rules.

(1) Beureria *Ehret*, Pl. et Papil. depict. t. 13 (1755).—Dedicated by Ehret to Joh. Ambrosius Beurer, a Nuremberg apothecary, and life member of the Acad. Nat. Curiosorum. It is a nomenclatural synonym of the conserved name *Calycanthus* L. (1759), and hence does not invalidate the following name.

(2) Beurreria *Jacq.* Sel. Stirp. Am. Hist. 44 (1763) ; Obs. Bot. ii. 2 (1767). *Bourreria* P. Br. Jam. 168 (1756) ; Jacq. Enum. Pl. Carib. 2, 14 (1760). *Beureria* Spreng. Syst. i. 647 (1825).—Patrick Browne called the genus " after Mr. Bourer, an apothecary of Nuremberg, who was a great promoter of natural history." The

actual name of the apothecary, however, was Beurer (see above, under *Beureria*). This seems to have been discovered by Jacquin between 1760 and 1763, for in the latter year he changed the spelling to *Beurreria*. Finally, in 1825, Sprengel discarded an " r," spelling the name *Beureria*, so as to make it correspond more closely with Beurer.

Since *Bourreria* contained an *unintentional* orthographic error the second letter being an " o " instead of an " e ", Jacquin was justified in modifying the spelling to *Beurreria* ; but since both Patrick Browne and Jacquin deliberately used the double consonant " rr " (in *Bourreria* and *Beurreria*), Sprengel was not justified in further modifying the name to *Beureria*.

Boerhavia *L.* Sp. Pl. ed. 1, 3 (1753) ; Gen. Pl. ed. 5, 4 (1754). *Boerhaavia* Mill. Gard. Dict. Abridg. ed. 4 (1754) ; Boehm. in Ludw. Def. ed. 3, 3 (1760). *Boerrhavia* Neck. Elem. i. 124 (1790). *Boerhaavea* Kuntze, Rev. Gen. ii. 532 (1891).—Linné latinized Boerhaave's name as " Boerhavius " (Sp. Pl. ed. 1, list of ' Auctores usitatiores '), and *deliberately* adopted the spelling *Boerhavia*, doubtless on the ground that the double vowel " aa " was out of place in a Latin name. The case is similar to those of *Swertia* and *Valantia*.

Borago *L.* Sp. Pl. ed. 1, 137 (1753) ; Gen. Pl. ed. 5, 67 (1754). *Borrago* Mill. Gard. Dict. Abridg. ed. 4 (1754)—vide p. 288.

Brachypterys *A. Juss.*—vide sub *Aspidopterys*.

(1) Bradlea *Adans.* Fam. ii. 324, 527 (1763), sensu *Apios* + *Wisteria*. *Bradleya* Britt. Man. Fl. N. States & Canada, 548 (1901), sensu *Wisteria*. *Bradleya* Post et Kuntze Lexic. Gen. Phan. 78 (1903), sensu *Apios*. *Bradleia* Britt. et Brown, Ill. Fl. ed. 2, ii. 418 (1913), sensu *Apios*.—*Bradlea* is a prior name for *Apios* Moench (1794).

(2) Bradlaeia *Neck.* Elem. 169 (1790). *Bradleia* Wittst. Etym. Handwörterb. ed. 2, 121 (1856). *Bradleya* Post. et Kuntze, Lexic. Gen. Phan. 78 (1903).—*Bradlaeia* is a synonym of *Siler* Crantz (1767).

(3) Bradleja *Banks ex Gaertn.* Fruct. ii. 127, t. 109 (1791). *Bradleia* Cav. Ic. iv. 48, t. 371 (1797). *Bradleya* Post et Kuntze, Lexic. Gen. Phan. 78 (1903).—*Bradleja* is a synonym of *Glochidion* Forst. (1776).

(4) Bradleya *Kuntze*, Rev. Gen. i. 40 (1891). *Braddleya* Vell. Fl. Flum. 93 (1825) ; ii. t. 140. *Bradleia* Wittst. Etym. Handwörterb. ed. 2, 121 (1856).—*Braddleya* Vell. is a taxonomic synonym of *Amphirrhox* Spreng. (1827), which is a nomen conservatum (Internat. Rules, ed. 2, 94). Vellozo spelt the name with two " d "s because he thought that Richard Bradley's name was Braddley (l.c. 94). Hence the spelling *Braddleya* may be corrected to *Bradleya* under Art. 57.

The four preceding generic names, *Bradlea, Bradlaeia, Bradleja* and *Bradleya* were all commemorative of Richard Bradley, 1675-1732, Professor of Botany at Cambridge. It will be noticed that each of them has been spelt both as *Bradleia* and as *Bradleya*. This case illustrates two important points : (1) not more than one generic name should be formed from the same personal name, otherwise confusion may result ; (2) it is generally undesirable to "correct" the original spelling, as different authors may "correct" it in different ways.

Buddleja *L.* Sp. Pl. ed. 1, 112 (1753) ; Gen. Pl. ed. 5, 51 (1754). *Budleia* Adans. Fam. ii. 224 (1763). *Budleja* Neck. Elem. ii. 9 (1790). *Budlaea* Swartz, Obs. Bot. 47 (1791). *Buddleia* Willd. Sp. Pl. i. 631 (1797). *Budlea* St. Hil. Expos. i. 272 (1805). *Buddlea* Spreng. Anleit. ed. 2, ii. p. 479 (1817).—The generic name *Buddleja* was originally proposed (in manuscript) by Houston to commemorate the English botanist, Buddle. It was accepted by Linné in Gen. Pl. ed. 1, 26 (1737), Hort. Cliff. 35 (1737), Gen. Pl. ed. 2, 45 (1742), Syst. Nat. ed. 10, 895 (1759), Sp. Pl. ed. 2, 162 (1762) and Gen. Pl. ed. 6, 57 (1764), as well as in 1753-54.

Either *Buddleia* or *Buddlea* would have been preferable, the latter being formed in accordance with Rec. IV a. Under Art. 24, however, the spelling adopted by Linné in 1753-54 must be retained.

Buginvillaea *Comm. ex Juss.* Gen. 91 (1789). *Bugainvillea* Nees et Mart. in Nov. Act. Nat. Cur. xi. 39 (1823). *Bugenvillea* Endl. Gen. 312 (1837). *Buginvillia* Blanco, Fl. Filip. 307 (1837). *Bougainvillea* Spach Vég. Phan. x. 516 (1841). *Bugainvillaea* Brongn. Énum. genres, 101 (1843).—Jussieu, who published the generic name, was at liberty under the Rules to latinize Bougainville's name as he pleased, hence the name *Buginvillaea* is correct, as has been recognized by Bailey (Manual of Cultivated Plants, 254 : 1924). As the genus is so widely known under the spelling *Bougainvillea*, which is moreover formed in accordance with Rec. IV a, it may perhaps be considered desirable to conserve that spelling.

Bulbophyllum *Thouars*, Hist. Pl. Orch. Isles Afr., 3me Tabl. Espèces, tt. 93-110 (1822). *Bolbophyllum* Spreng. Syst. iii. 732 (1826).—It is a pity that Thouars did not adopt the form *Bolbophyllum*, from βολβὸς and φύλλον, instead of compounding the Latin word bulbus with the latter. Nevertheless the generic name must stand as published by Thouars (Art. 50).

Caiophora *Presl*, Rel. Haenk. ii. 41, t. 56 (1831)*. *Cajophora* Endl. Gen. 931 (1839).—The form *Cajophora* has been adopted by Urban, Monogr. Loasac. 268 (Nov. Act. Nat. Cur. lxxvi : 1900) and others, but Endlicher was not justified in altering the original spelling.

* The date 1835, given by Urban, and by Dalla Torre et Harms, Gen. Siphonog. 333, is not the original date of publication.

Castilleja *Mutis ex L. f.* Suppl. 47 (1781). *Castileia* Vent Tabl. ii. 299 (1799). *Castilleia* Spreng. Syst. ii. 774 (1825). *Castileja* Meisn. Gen. ii. 223 (1840). *Castillejoa* Post et Kuntze, Lexic. Gen. Phan. 104 (1903).—The genus was named in honour of Domingo Castillejo, Professor of Botany at Cadiz in the times of Mutis. There was thus no justification, either nomenclatural or philological, for changing the original spelling *Castilleja*.

Chimaphila *Pursh*, Fl. Am. Sept. i. 279, 300 (1814). *Chimophila* Radius, Diss. Pyrol. 7, 33, t. 5, fig. 2 (1821).—The form *Chimophila*, though philologically preferable, is nomenclaturally invalid. The case is similar to that of *Stigmaphyllon*, q. v.

Corallorrhiza *R. Br.* in Ait. Hort. Kew. ed. 2, v. 209 (1813). *Coralliorrhiza* Aschers. Fl. Brandenb. 697 (1864).—The fact that *Coralliorrhiza* is philologically preferable, does not warrant the rejection of the form *Corallorrhiza*, which was adopted by Robert Brown from Gmelin, Fl. Sibir. i. 26 (1747) and Haller, Hist. ii. 159 (1768). The name appeared as *Corallorhiza* Rupp. in Haller, Enum. 278 (1742). Haller (1768) cited *Corallorrhiza* from "Rupp. I. p. 281" which apparently refers to Ruppius, Flora Jenensis, ed. 1. 284 (1718), which is the only work by Ruppius included in Haller's Catalogus auctorum et editionum (Hist. i. p. xlii. col. 1), three editions being mentioned, the others being those of 1726 and 1744 respectively. The reference is *Orobanche spuria seu corallarrhiza* Rupp. (l.c.). By the use of the epithet *spuria*, Ruppius indicated that the species did not really belong to *Orobanche*. Also he removed it from *Orobanche* (p. 232), and placed it after *Orchis* (p. 284), with the following remark. "Et hujus plantae flos est irregularis hexapetalus, non secus ac totius classis, unde hactenus male modo ad *Orobanchen*, modo ad *Dentariam* relata fuit." In Haller's edition of Ruppius, Fl. Jen. 301 (1745), the generic name *Rhizocorallon* is used for the plant. The name *Corallorrhiza*, however, is used by Haller in an editorial note. I have been unable to trace the citation "*Corallorrhiza* Rupp. Orchid. gen. constit. p. 12" (Haller, Hist. ii. 159). It may possibly refer to one of the "codices Ruppii manu scripti" mentioned by Haller, Biblioth. Bot. ii. 147 (1772).

Coreopsis *L.* Sp. Pl. ed. 1, 907 (1753); Gen. Pl. ed. 5, 388 (1754). *Coriopsis* Clements in Nebraska Univ. Studies, iii. No. 1, 54 (1902).—The name *Coreopsis* was derived by Linné (Phil. Bot. 178: 1751) from κόρις cimex, and ὄψις, facies. As the genitive of κόρις is either κόριος or κόρεως there was no justification for the so-called correction.

(1) Corydalis [*Knaut*, Meth. Pl. 153 (1716); Dill. Nov. Gen. 129, t. 7 (1719)] Medik. Phil. Bot. i. 96 (1789).—Synonymous with *Cisticapnos* Adans., 1763 (*Cysticapnos* Gaertn., 1791), being based on *Fumaria vesicaria* L. This genus is united by many authors with *Corydalis* Vent.

(2) Corydalis *Vent.* Choix, 19 (1803), quoad syn. *Capnoides* Adans. [excl. *C. fungosa* Vent., quae *Adlumia fungosa* Greene est]. *Corydallis* Aschers. Fl. Brandenb. 28 (1864).—*Corydalis* was a name mentioned by Mattioli, Comment. 566 ll. 16, 19 (1560), Compend. 807 (1571), Epit. ed. Camerarius, 892 (1586), C.Bauhin, Pinax, 143, No. v. (1623), J. Bauhin, Hist. iii. pars 1, 203 (1651), and Ray, Hist. i. 975, l. 12 (1686). It was spelt κορυδαλὶς (*Corydalis*) in Kuhn's edition of Galen's Opera, xii. 361 (1826). Even if Ascherson was right in stating that the correct classical spelling is *Corydallis*, the form *Corydalis* should be retained for botanical purposes: Medikus and Ventenat were at liberty to adopt the customary mediaeval spelling, *Corydalis*, for their genera.

Cypripedium *L.* Sp. ed. 1, 951 (1753); Gen. Pl. ed. 5, 408 (1754). *Cypripedilum* Aschers. Fl. Brandenb., 700 (1864). *Cypripedilon* St. Lager in Cariot, Étude des Fleurs, ed. 8, sec. Rouy in Morot, Journ. de Bot. viii. 58 (1894). *Cypridopedilum* Aschers. et Graebn. Fl. Nordostdeutsch. Flachl. 204, adnot. 2 (1898). *Cypridopedium* Clements in Nebraska Univ. Studies, iii. 54 (1902).—Under the Rules, the original spelling *Cypripedium*, adopted by Linné in 1735 and consistently employed by him in his subsequent works, must be retained. He used it in Syst. Mat. ed. 1 (1735), Fl. Lapp. 248 (1737), Gen. Pl. ed. 1, 272 (1737), Hort. Cliff. 430 (1737), Gen. Pl. ed. 2, 435 (1742), Fl. Suec. ed. 1, 264 (1745), Phil. Bot. 27, 143, 186 (1751), Fl. Suec. ed. 2, 318 (1754), Syst. Nat. ed. 10, 1245 (1759), Sp. Pl. ed. 2, 1346 (1763), Gen. Pl. ed. 6, 464 (1764), Syst. Nat. ed. 12, 595, errore "*Cyrripedium*" (1767), and Mantissa Altera, 491 (1771), as well as in 1753-54.

In Fl. Lapp. 248, n. 318, adnot β (1737) Linné explained the meaning of the name. "*Cypripedium*, quasi calceum Veneris, diximus a floris figura et viribus. Calceus est nomen aequivocum." In Philosophia Botanica, 186, he derived *Cypripedium* from κύπρις and ποδίον, and gave the meaning as "Veneris calceus" (i.e., Venus's Slipper). The second half of the name should have been *-podium*, but Linné made it *-pedium*, probably from analogy with Lat. *pes*, foot. The Greek word "ποδίον" (correctly ποδεῖον) means a foot-band or sock. The word πόδιον, on the other hand, means a little foot, being a diminutive of πούς, a foot.

Diervilla *Adans.* Fam. ii. 157 (1763). *Diervillea* Bartl. Ord. 214 (1830).—The fact that the genus was named in honour of Dierville, does not warrant the alteration of the original spelling.

Diplopterys *A Juss.*—vide sub *Aspidopterys.*

Dorycnopsis *Boiss.* Voy. Esp. 163 (1840). *Dorycniopsis* C. Lemaire in d'Orbigny Dict. Hist. Nat. v. 118 (1848); ed. 2, v. 239.—Briquet, Prodr. Fl. Corse, ii. 320 (1913), upholds the original spelling *Dorycnopsis* on the ground that Boissier in compounding δορύκνιον

and ὄψις was at liberty to omit the " i " in the former, since generic names may be composed in an absolutely arbitrary manner (Art. 24).

Dovyalis *E. Meyer* ex Arn. in Hook. Journ. Bot. iii. 251 (1841). *Doryalis* Drège, Zwei pflanzengeogr. Docum. 180 (1843).—The name *Dovyalis* is clearly so written on the labels of four specimens of the type-species, *D. zizyphoides* E. Mey., in the Kew Herbarium. The spelling *Doryalis* in the Index to Drège's work may be a mistake—at all events there is nothing to show that Meyer was responsible for it.

Arnott published the name as *Dovyalis*, as it was spelt on the labels, and printed in the main body of Drège's work (p. 124, IV, C, b, 8), and this spelling was accepted by Sonder in Linnaea, xxiii. 12 (1850), Harvey in Harv. et Sond. Fl. Cap. i. 69 (1859-60), and Bentham in Benth. et Hook. f. Gen. Pl. i. 128 (1862). In 1893, however, Warburg adopted the spelling *Doryalis*, stating (1) that the name originated with Drège and (2) that *Dovyalis* was either a misprint or a mistake on the part of Meyer. The only evidence offered by Warburg in support of these statements is the fact that *Doryalis* is spelt with an " r " in the Index to Drège's book, and appears before *Dovea*. In the first place there is nothing to show that Drège either suggested the generic name, or was responsible for it in any way ; and secondly, as has been pointed out by Marloth (Flora of South Africa, ii. 194 : 1925) " it is quite possible that the indexer was not Drège himself, and that having mis-read the name in the manuscript, he naturally placed it before *Dovea*." The fact that the meaning, if any, of *Dovyalis* is unknown, whereas *Doryalis* might well have been formed from δόρυ, a spear, in allusion to the extremely spiny nature of the shrub, lends support to the view that the spelling *Dovyalis* in the distributed sets of Drège's plants was an error for *Doryalis*. In the preface to his Commentar. Pl. Afr. Austr. (1835-37), p. vii. Meyer states that he has endeavoured to construct his new names in correct Greek form : " Nomina nova Graecitati qua potui diligentia accomodare studui."

The name, however, was published as *Dovyalis*, and though it may be shrewdly suspected that it was a mistake for *Doryalis*, in the absence of definite proof the original spelling should be maintained under the Rules.

Echinopterys *A. Juss.*—vide sub *Aspidopterys*.

Eleocharis *R. Br.* Prodr. i. 224 (1810). *Heleocharis* Lestib. Ess. Cyperac. 41 (1819).—It is unfortunate that Robert Brown should have omitted the initial aspirate in coining the new generic name *Eleocharis*, but Lestiboudois was not justified under International Rules in modifying the name. The case is comparable with those of *Aplopappus*, *Aplophyllum* and *Aplolophium*.

Elichrysum *Mill.* Gard. Dict. Abridg. ed. 4 (1754). *Helichrysum* Pers. Syn. ii. 414 (1807).—Briquet (Burnat, Fl. Alp. Marit, vi.

261 : 1917) has shown that the original spelling *Elichrysum* Mill. must be retained under the Rules. As the genus, however, is very well known under the name *Helichrysum*, and is of considerable horticultural importance, it is suggested that the form *Helichrysum* should be conserved.

Epifagus *Nutt.* Gen. ii. 60 (1818). *Epiphegus* Spreng. Neue Entdeck. i. 264 (1820).—This appears in the list of conserved generic names as "*Epiphegus* Nutt. Gen. Am. II. (Mai 1818) 60," which is inaccurate. Nuttall published the name as *Epifagus*, and Sprengel's alteration was unauthorized by the Rules. The name is accepted as *Epifagus* Nutt. in Gray's New Man. 739 (1908), which seems to indicate that Robinson and Fernald did not regard the spelling *Epiphegus* as being conserved. Compare the cases *Aplopappus* and *Maianthemum*.

Euodia *J. R. et G. Forst.* Char. Gen. Pl. 13, t. 7 (1776). This spelling must be retained under the Rules, as it contains no typographic or orthographic error. The form *Evodia* Scop. Introd. 250, et index, fol. B 2 recto (1770), which has been generally adopted, cannot be maintained unless it is specially conserved. It is not even certain that Scopoli intended to alter the spelling of *Euodia* Forst. The same character " V " was employed in his Introduction to represent both " U " and " V " in generic names, and " I " was used for both " I " and " J ". Thus *Usubis* Burmann was printed " VSVBIS " (l.c.), and *Juglans* L. appeared as " IVGLANS." However, the generic name appeared as "*Evodia*" in the Index, which Scopoli probably corrected, even if he did not prepare it ; and in the first edition of his Flora Carniolica, 324 (1760), he had previously adopted the spelling of *Evonymus* in preference to *Euonymus*, so that all things considered, the spelling *Evodia* may perhaps be attributed to him.

As *Euodia* is an important tropical Asiatic and Australasian genus, comprising at least 100 species, it may perhaps be considered desirable to conserve the very widely used spelling *Evodia*.

Euonymus *L.* Gen. Pl. ed. 5, 91 (1754). *Evonymus* L. Sp. Pl. ed. 1, 197 (1753).—This case is discussed at length on pp. 294–296.

Furcraea *Vent.* in Bull. Soc. Philom. i. 65 (1793). *Furcroya* Rafin. Princ. Somiol. 31 (1814). *Fourcroya* Spreng. Anleit. ed. 2, ii. 238 (1817). *Fourcroea* Haw. Suppl. Pl. Succ. 42 (1819). *Furcroea* Benth. in Benth. et Hook. f. Gen. Pl. iii. 739 (1883).—The case is analogous to that of *Valantia* (q. v.). Ventenat was at liberty to latinize Fourcroy's name as he pleased, and the spelling *Furcraea* chosen by him cannot be altered under the Rules.

Galinsoga *Ruiz et Pav.* Prodr. 110, t. 24 (1794). *Galinsogea* Willd. Sp. Pl. iii. 2228 (1804). *Gallinsoga* Jaume St. Hil. Expos. i. 417 (1805). *Galinsogaea* Zuccar. in Flora, iv. 612 (1821).—The genus was dedicated to Dr. Mariano Martinez de Galinsoga. The form

Galinsogaea is philologically preferable, and is in accordance with Rec. IVa, but the original spelling cannot be altered under the Rules (Art. 24). The cases of *Maranta* L. and *Aldrovanda* L. are comparable.

Galium *L.* Sp. Pl. ed. 1, 105 (1753) ; Gen. Pl. ed. 5, 46 (1754). *Gallium* Boehm. in Ludw. Def. Gen. Pl. ed. 2, 5 (1760). *Galion* St. Lag. in Ann. Soc. Bot. Lyon, vii. 81, 113, 126 (1880).

Gleditsia *L.* Sp. Pl. ed. 1, 1056 (1753) ; Gen. Pl. ed. 5, 476 (1754). *Gledisia* All. in Misc. Taur. v. 75 (1773). *Gleditschia* Scop. Introd. 295 (1777). *Gleditzia* Jaume St. Hil. Expos. ii. 202 (1805).—Compare the cases of *Bartsia* and *Valantia*. Linné was at liberty to omit the " ch " in Gleditsch in forming the generic name.

Haloragis *J. R. et G. Forst.* Char. Gen. 61, t. 31 (1776). *Halorrhagis* Petersen in Engl. et Prantl, Nat. Pflanzenfam. iii. Abt. 7, 232 (1893).—The fact that the form *Halorrhagis* is philologically preferable does not warrant the rejection of the name *Haloragis* chosen by J. R. and G. Forster (Art 50).

Hierochloë *R. Br.* Prodr. 208 (1810), nomen conservatum. *Hierochloa* Beauv. Agrost. 62 (1812).—The spelling *Hierochloa* was adopted by Post et Kuntze, Lexic. Gen. Phan. 280 (1903). Apart from the fact that the name *Hierochloë* is now conserved, that spelling was published previously to *Hierochloa*, and is equally good from a philological point of view.

Hippophaë *L.* Sp. Pl. ed. 1, 1023 (1753) ; Gen. Pl. ed. 5, 449 (1754). —*Hippophaës* St. Lager in Ann. Soc. Bot. Lyon, vii. 83, 88 (1880) ; Aschers. & Graebn. Fl. Nordostdeutsch. Flachl. 503 (1899).—The original spelling *Hippophaë* must be retained under the Rules (Art. 24 and 50).

Jasione *L.* Sp. Pl. ed. 1, 928 (1753) ; Gen. Pl. ed. 5, 400 (1754). *Iasione* Moench, Meth. 518 (1794).—The classical ἰασιώνη Theophr., *Iasione* Plin., was *Calystegia sepium* R. Br. It was described as a wild herb, abounding in latex, and as having a white flower composed of a single " leaf " but so folded that there appear to be several " leaves " (Theophr., Enquiry into Plants, transl. Hort. i. 90 ; Pliny, Hist. Nat. ed. Harduin. ii. 251, l. 25, 278, l. 21). Linné altered the spelling to *Jasione*, and applied the name so altered to a new genus (Gen. Pl. ed. 1, 266 : 1737), which he afterwards placed in his family *Campanacei*, which included genera now assigned to *Convolvulaceae, Polemoniaceae* and *Campanulaceae*, and the genus *Viola*. Under Art. 24, generic names may be taken from any source whatever, and may even be composed in an absolutely arbitrary manner, while under Art. 50, no-one is authorized to change or modify a name because it is badly chosen. Hence *Jasione* must be spelt as published by Linné.

Jateorhiza *Miers* in Hook. Niger Fl. 212 (1849) ; Ann. Nat. Hist. sér. 2, vii. 38 (1851) ; Contrib. Bot. iii. 26 (1871). *Jatrorrhiza* Prantl in Engl. et Prantl, Nat. Pflanzenfam. iii. Abt. 2, 87 (1888). *Jatrorhiza* Post et Kuntze, Lexic. Gen. Phan. 296 (1903).—The name seems to have been compounded by Miers from ἰατέος (from ἰάομαι) and ῥίζα. Hence the so-called corrections by Prantl, and by Post and Kuntze, were unnecessary.

Jatropha *L.* Sp. Pl. ed. 1, 1006 (1753) ; Gen. Pl. ed. 5, 437 (1754). *Iatropha* Stokes Bot. Mat. Med. iv. 447 (1812).—Derived from "ἰατρόν, medicamentum, and φάγω, edo" (Linn. Phil. Bot. 184 : 1751). Linné's action in spelling the name with an initial "J" instead of an "I" cannot be reversed. The case is similar to that of *Jasione*.

Juglans *L.* Sp. Pl. ed. 1, 997 (1753) ; Gen Pl. ed. 5, 431 (1754). *Iuglans* Moench, Meth. 696 (1794).

Jussiaea *L.* Sp. Pl. ed 1, 388 (1753) ; Gen. Pl. ed. 5, 183 (1754). *Jussia* Adans. Fam. ii. 85 (1763). *Jussieua* Murr. Syst. 335 (1774) ; Reichard, Gen. Pl. 220 (1778).* *Jussieuia* Thunb. Fl. Jap. 180 (1784).†—The spelling *Jussiaea* chosen by Linné in 1753-54 must be retained under the Rules. The case is similar to that of *Valantia* (q. v.) which has been decided by Briquet.

Kentranthus *Necker*, Elem. Bot. i. 122 (1790). *Centranthus* DC. Fl. Franç. iv. 238 (1805)—"La graphie *Kentranthus* de Necker a la priorité et doit être conservée. Nous considérons le nom de *Centranthus* comme une variante orthographique et ne changeons pas les citations des auteurs pour des combinaisons de noms spécifiques" —Briquet in Burnat, Fl. Alp. Marit v. 186 (1915).

Kissenia *R. Br.* ex T. Anders. in Journ. Linn. Soc. v. Suppl. 1, 43 (1860). *Fissenia* R. Br. ex Endl. Gen., Suppl. 2, 76 (1842).—The genus was named by Robert Brown in honour of Kissen, a traveller in Arabia, who collected *K. spathulata*. Brown wrote the name as *Kissenia*. *Fissenia* was an *unintentional* orthographic error on the part of Endlicher—vide Dandy in Kew Bull. 1926, 174.

* Pfeiffer, Nomencl. Bot. i. 1802 (1874) attributed the spelling "*Jussieva*" to Reichard, l.c., apparently not realizing that Reichard used the symbol "V" for both "U" and "V," and "u" for both "u" and "v." Thus *Quisqualis* appeared as "QVISQVALIS" on p. 221 and as "*Quisqualis*" on p. 207 ; *Ulva* appeared as "VLVA" on p. 562 and as "Vlua" in the Index, where all the "U"s and "V"s are in one series. Hence it can only be inferred indirectly in each case which of the two letters Reichard intended to use. As *Jussieua* had been adopted four years previously in Murray's "Systema" that spelling was probably the one which Reichard intended to use.

† The actual spelling was "IUSSIEUIA." Since the symbol "I," however, stood for both "I" and "J," the spelling intended can only be inferred indirectly, as in the case of Reichard's 'Genera.'

Koeleria *Pers.* Syn. i. 97 (1805). *Köleria* Spreng. Anleit. ed. 2, ii. 164 (1817). *Kölera* Spreng. Syst. i. 332 (1825). *Koelera* St. Lag. in Ann. Soc. Bot. Lyon, viii. 171 (1881).—Although *Koelera* is in accordance with Rec. IV b, and *Koeleria* is not, the latter must be retained because it was the original spelling.

Leonurus *L.* Sp. Pl. ed. 1, 584 (1753) ; Gen. Pl. ed. 5, 254 (1754). *Leonuros* St. Lag. in Ann. Soc. Bot. Lyon, vii. 129 (1880). *Leonturus* Aschers. et Graebn. Fl. Nordostdeutsch. Flachl. 606 (1899).—Doubtless *Leonturus* is philologically preferable to *Leonurus*, but the latter, being the original spelling, must stand.

Leptolaena *Thou.* Hist. Vég. Isles Afr. ed. 2, 41, 46, t. 11 (1805). *Leptochlaena* Spreng. Syst. ii 330 (1825).—The case is parallel to those of *Sarcolaena* and *Schizolaena*.

Leucojum *L.* Sp. Pl. ed. 1, 289 (1753) ; Gen. Pl. ed. 5, 140 (1754). *Leucoium* Willd. Sp. Pl. ii. 30 (1800). *Leucoïum* Aschers. Fl. Brandenb. 706 (1864).—The spelling *Leucoïum* corresponding with λευκόϊον, would have been preferable to *Leucojum*, but the latter was chosen by Linné.

Lophopterys *A. Juss.*—vide sub *Aspidopterys*.

Ludwigia *L.* Gen. Pl. ed. 5, 55 (1754). *Ludvigia* L. Sp. Pl. ed. 1, 118 (1753).—The question whether Sp. Pl. ed. 1 enjoys priority over Gen. Pl. ed. 5 is discussed and answered in the negative on pp. 294-296. Of the two spellings *Ludvigia* and *Ludwigia*, the latter is adopted because it is correctly formed according to Rec. IV b.

Luehea *Jackson* Ind. Kew. ii. 123 (1894). *Lühea* Willd. in Neue Schr. Ges. Naturf. Freunde, Berlin, iii 409, t. 5 (1801) ; Sp. Pl. iii. 1434 (1803). *Luhea* DC. in DC. Prodr. i. 517 (1824).—The name *Luehea*, as transcribed by Jackson, in accordance with Rec. IV c, may be attributed to Willdenow. The phrase " Letters which are unknown to botanical Latin must be transcribed, diacritic signs are suppressed " seems intended to have the force of a Rule, though it is inserted as part of a Recommendation.

Maianthemum *Wigg.* Prim. Fl. Holsat. 14 (1780). *Majanthemum* Gmel. Syst. 266 (1791). *Mayanthemum* DC. Fl. Franç. iii. 177 (1805).—The name *Maianthemum* is conserved (Internat. Rules, ed. 2, 82). It appears in that list under the later spelling *Majanthemum*, but that is merely because the list was drawn up directly from Dalla Torre et Harms, Genera Siphonogamarum, 71, n. 1119, where the name was spelt with a " j ". The original (and at least equally correct) spelling *Maianthemum* should be retained.

Malcolmia *Spreng.* Anleit ed. 2, ii. 716 (1818). *Malcomia* R. Br. in Ait. Hort. Kew. ed. 2, iv. 121 (1812).—Briquet, Prodr. Fl. Corse, ii. 51 (1913), considers that the name appeared as " *Malcomia*" by a typographical error, and that the spelling *Malcolmia* may be

attributed to Robert Brown. The generic name is conserved (Internat. Rules, ed. 2, 87), but that does not necessarily mean that the particular *spelling* used in the list (taken from Dalla Torre et Harms, Gen. Siphonog.) is conserved. Compare the case of *Maianthemum*.

Mr. J. Ardagh, of the Department of Botany, British Museum, has kindly informed me that Robert Brown wrote the names of this genus and *Matthiola* as "*Malcomia*" and "*Mathiola*" respectively on the herbarium sheets. Brown may therefore have intended to omit the second (and *mute*) "l" in Malcolm's name, in order that the Latin generic name might be pronounced like the Scottish surname.

(1) Matthiola *L.* Sp. Pl. ed. 1, 1192 (1753); Gen. Pl. ed. 5, 499 (1754). *Mathiola* Scop. Introd. 143 (1777).—The genus was based on *M. scabra* L., which is at present included under *Guettarda* L. (1753), as the type of sect. *Matthiola* (L.) Benth. et Hook. f. Gen. Pl. ii. 100 (1873); the correct name as a section is, however, sect. *Guettardaria* DC. in DC. Prodr. iv. 455 (1830), according to Art. 49.

There can be no doubt that *Matthiola* L. is a valid name, as defined in Art. 56. Hence under Art. 51, 2°, *Mathiola* R. Br. is invalid, and cannot be retained unless it is specially conserved. The only generic homonyms that may be adopted under Art. 50 are homonyms of *non-valid names*.

(2) Matthiola *Spreng.* Anleit. ed. 2, ii. 714 (1818). *Mathiola* R. Br. in Ait. Hort. Kew. ed. 2, iv. 119 (1812).—Briquet, Prodr. Fl. Corse, ii. 53 (1913), states that the spelling *Mathiola* which appeared in the "Hortus Kewensis" was the result of an orthographic error on the part of Robert Brown. In that case the form *Matthiola* adopted by Sprengel may be attributed to Brown. Since *Matthiola* R. Br. is invalidated by the existence of the prior *Matthiola* L. (q. v.), it is suggested that it should be conserved.

Melandrium *Roehl.* Deutschl. Fl. ed. 1, 274 (1796); ed. 2, ii. 274 (1812). *Melandryum* Reichb. Handb. 298 (1837). *Melandrum* Blytt, Norges Fl. iii. 1068 (1876). *Lychnis* sect. *Melandryum* Reichb. Fl. German. Excurs. 824 (1832).—When Roehling based a new genus on *Lychnis dioica* L. Sp. Pl. 437, he chose for it the name *Melandrium*, which Linné had cited as a synonym of that species: "*Melandrium Plinii genuinum* Clus. Hist. i. 294, mas." The actual spelling employed by Clusius, however, was *Melandryum*, and on this account Reichenbach "corrected" Roehling's generic name *Melandrium* by replacing the "i" with a "y". This "correction" was accepted by Ascherson (Fl. Brandenb. 89: 1864), Dalla Torre et Harms, Gen. Siphonog. 161 (1901), and others, who apparently overlooked the fact that the spelling *Melandryum* employed by Clusius and in early editions of Pliny's Historia Naturalis, was itself due to an error, the original form of the name being "malundrum." The sentence "Iocineri autem herba melandryum nascens in segete ac pratis

flore albo odorata " occurs in the following editions of Pliny's Historia Naturalis, lib.. xxvi. cap, vii. : ed. Alexander Benedictus, 1507, fol. 196, verso, l. 19 ; ejusdem, ed. 1513, fol. cxcv, recto, l. 24 ; ed. Dalecampius, 1615, p. 539, col. 2, l. 54. In a marginal note, however, Dalechamps (l.c.) gave the alternative spelling " malundrum " Ch. [Chiffletianus codex manuscriptus]. The form *Melandryon* was employed by Ruellius, De Nat. Stirp. 457, l. 4 (1537) and Ray, Hist. i. 709 (1686). *Melandryum*, on the other hand was used by Lobel, Obs. 184 (1576) and Clusius, Hist. 293, 294 (1601). Caspar Bauhin (1623) had three different spellings : *Melandryon* (Pinax, 163) as a synonym of *Barba caprae* [*Spiraea* L.] ; *Melandrium* under *Lychnis sylvestris quae Been album vulgo* [*Silene vulgaris* Garcke] ; and *Melandryum* under *Lychnis sylvestris sive aquatica purpurea simplex* [*Lychnis dioica* L.]. Ambrosini, Phytologia, 350, referred *Melandryon* to *Barba Caprae floribus oblongis* C. B. P. [*Spiraea Aruncus* L.], and the genuine and false kinds of *Melandryum* respectively to *Ocimoides purpureum* [*Lychnis dioica* L.] and *Been album* [*Silene vulgaris* Garcke].

Harduinus seems to have been the first to point out that the *correct* spelling of the plant mentioned by Pliny was malundrum, not melandryum. He has " Jocineri autem herba malundrum " with the following footnote : " Sic MSS. omnes, tum hoc loco, tum in Indice : non, ut editi, *melandryum* : quod ineptum est, si flore albo odorata (Pliny Hist. Nat. ed. Harduinus, ii. 396, l. 13, adnot.). Lewis and Short, Latin Dictionary, 1104 (impr. 1927) accepted malundrum, and did not even mention melandryum as an alternative spelling for the plant in question, though they included the latter with its proper meaning, " a piece of salted tunny-fish " (μελάνδρυον).

The case of *Melandrium* is a further illustration of the dangers attending the alteration of names on philological grounds, and without adequate investigation. Fortunately, under Art. 50, the spelling *Melandrium* must be retained, as there was no unintentional error of an orthographic or typographic nature in the original publication by Roehling. The fact that *Melandrium*, like *Melandryum*, is philologically corrupt, is immaterial under the Rules. Otherwise the spelling " malundrum " would have to be adopted.

Mesembryanthemum *L.* Sp. Pl. ed. 1, 480 (1753) ; Gen. Pl. ed. 5, 215 (1754). *Mesembrianthemum* Spreng. Bot. Gart. Halle, Erster Nachtr. 28 (1801) ; Batsch, Tab. 38 (1802)—vide p. 115.

Morea *Mill.* Fig. Pl. ii. 159, t. 239 (1758) ; Gard. Dict. ed. 7, Addenda (1759) ; N. E. Brown in Journ. Linn. Soc., Bot. xlviii. 40. *Moraea* L. Sp. Pl. ed. 2, 59 (1762).—Miller dedicated the genus *Morea* to Robert More of Shrewsbury. Under Art. 24 and 50, the original spelling must be used. If it is desired to retain the well-known and widely used form *Moraea* L., it will be necessary to place that on the list of conserved names.

Ortegia *L.* Gen. Pl. ed. 5, 21 (1754) ; Loefl. Iter 122. *Ortega* L. Sp. Pl. ed. 1, 560 (1753). *Ortegaea* Post et Kuntze, Lexic. Gen. Phan. 405 (1903).—As explained on p. 295, the writer takes the view that Sp. Pl. ed. 1 and Gen. Pl. ed. 5 are treated under the Rules as though they were published at the same time, 1753, and that consequently where the spelling in these works differs, the more correct form should be adopted. Since the genus was named in honour of Ortega, the correct form according to Rec. IV a would have been *Ortegaea*, as proposed by Post and Kuntze. Of the two forms published by Linné, from which the choice should be made, *Ortegia* is preferable.

Osmorhiza *Raf.* in Amer. Monthly Mag. ii. 176 (1818) ; et in Journ. de Phys. lxxxix. 257 (1819). *Osmorrhiza* Reichb. Handb. 219 (1837). —Rafinesque was at liberty to compound his new generic name as he pleased, hence there is no justification under the Rules for the additional " r ".

The original publication of *Osmorhiza* (1818) appears to be invalid. Rafinesque pointed out that *Chaerophyllum Claytoni* Pers. required a new generic name : " whence several names have been proposed for it, *Washingtonia*, *Osmorhiza*, *Gonatherus* ; but these are not yet published ; the second is perhaps the best." Later he is said to have formally established the genus under the name *Osmorhiza* (vide Contrib. U.S. Nat. Herb. vii. 61). *Washingtonia*, *Osmorhiza* and *Gonatherus* as they appeared in 1818 were merely three names which Rafinesque suggested might be used. It was open to the next worker (Rafinesque himself) to choose any one or none of them, and Rafinesque chose *Osmorhiza*. His choice cannot be reversed under the Rules.

Penstemon *Mitchell* Diss. 36 (1769). *Pentstemon* Soland. in Ait. Hort. Kew. iii. 511 (1789) ; Schreb. Gen. ii. 808 (1791). *Pentastemon* Batsch, Tab. 193 (1802). *Pentostemon* Raf. in Atlantic Journ. 176 (1833). *Pentastemum* Steud. Nomencl. ed. 2, ii. 299 (1841).— The original spelling, *Penstemon*, must be retained under Art. 24 and 50.

Pereskia *Mill.* Gard. Dict. Abridg. ed. 4 (1754). *Peirescia* Zucc. in Abh. Akad. Muench. ii. 695 (1837). *Perescia* Lem. Cact. Hort. Monvill. p. xiv. (1838). *Peireskia* Steud. Nomencl. ed. 2, ii. 282 (1841). *Cactus* sect. *Peiresciae* Spreng. Syst. ii. 498 (1825).— The fact that the genus was named in honour of Peiresc does not justify the alteration of the original spelling *Pereskia*. Compare the case of *Valantia*.

Prunella *L.* Sp. Pl. ed. 1, 600 (1753) ; Gen. Pl. ed. 6, 301 (1764). *Brunella* L. Gen. Pl. ed. 5, 261 (1754)—vide p. 292.

Pyrola *L.* Sp. Pl. ed. 1, 396 (1753) ; Gen. Pl. ed. 5, 188 (1754). *Pirola* Neck. in Act. Theod. Pal. ii. 488 (1770).—This case is similar to that of *Pyrus* (q. v.). The name *Pyrola* occurs in Brunfels, Hist.

iii. 88 (1536), and was very much commoner than *Pirola* both before and after 1753.

Pyrus *L.* Sp. Pl. ed. 1, 479 (1753) ; Gen. Pl. ed. 5, 214 (1754). *Pirus* Haller, Hist. ii. 34 (1768).—From the revival of Botany in the sixteenth century (e.g. Brunfels, Herb. iii. 223) down to 1753 the form *Pyrus* was perhaps more commonly used than the correct classical form *Pirus*. Under Art. 24 Linné was at liberty to adopt the spelling *Pyrus*, and his choice cannot be reversed. Briquet, Prodr. Fl. Corse, 162 (1913), adopted that spelling, without any explanatory note, thus implicitly indicating that there could be no doubt as to the effect of the Rules in that particular case. In various other cases he supplied such notes (in Prodr. Fl. Corse and Fl. Alp. Marit.) e.g. *Alchemilla*, *Dorycnopsis*, *Kentranthus*, *Malcolmia*, *Matthiola*, *Rorippa*, *Wistaria*.

Raphanus *L.* Sp. Pl. ed. 1, 669 (1753) ; Gen. Pl. ed. 5, 300 (1754). *Rhaphanus* Gaud. Fl. Helv. iv. 192 (1829). *Rhaphanos* St. Lag. in Ann. Soc. Bot. Lyon, vii. 83, 133 (1880).—The Latin form of ῥάφανος being *Raphanus*, there was not even any philological reason for changing the original spelling to *Rhaphanus*.

Rhodolaena *Thou.* Hist. Vég. Isles Afr. ed. 2, 47, t. 13 (1805). *Rhodochlaena* Spreng. Syst. ii. 595 (1825).—The case is similar to those of *Sarcolaena* and *Schizolaena*.

(1) Richardia *L.* Sp. Pl. ed. 1, 330 (1753) ; Gen. Pl. ed. 5, 153 (1754). *Ricardia* Adans. Fam. ii. 158 (1763) ; Reliq. Houston. 5 (1781). *Richardsonia* Kunth in Mém. Mus. Par. iv. 430 (1818).—Named in honour of Richard Richardson (1663-1741), physician and botanist. Linné *deliberately* adopted the abbreviated form *Richardia*, although he was aware (Phil. Bot. 173 : 1751) that the surname of the man commemorated was Richardson not Richard. Hence the original spelling cannot be altered under the Rules.

(2) Richardia *Kunth* in Mém. Mus. Par. iv. 437 (1818).—Named in honour of L. C. Richard. A synonym of the conserved name, *Zantedeschia* Spreng. (Internat. Rules, ed. 2, 80).

Rorippa *Scop.* Fl. Carniol. ed. 1,520 (1760). *Roripa* Adans. Fam. ii. 417 (1763) ; Scop. Fl. Carniol. ed. 2, ii. 24.—The origin of the name *Rorippa* is doubtful. Scopoli attributed it to Gesner, but Briquet and others have searched Gesner's works without finding it. In these circumstances the original spelling *Rorippa* should be retained in spite of the fact that Scopoli later accepted *Roripa*, vide Briq. Prodr. Fl. Corse, ii. 28 (1913).

Rynchospora *Vahl*, Enum. ii. fol. 2, verso, n. 113, 229 (1806). *Rhynchospora* Willd. Enum. Pl. Hort. Berol. 71 (1809).—The generic name was derived from ῥύγχος, beak, and σπορά, seed, in allusion to the rostrate achenes, and it would therefore have been better had it been published as *Rhynchospora*. When it is remembered,

however, that ῥάδιξ became radix in Latin, ῥάφανος, raphanus, and ἑλλεβορίνη, either elleborine or helleborine, and that in numerous other cases an initial Greek aspirate was dropped when the word passed into the Latin language, the philological arguments for altering *Rynchospora* to *Rhynchospora* will not appear so cogent. In any case *Rynchospora* should be retained under Art. 24 and 50.

Ryssopterys *Blume* ex A. Juss. in Deless. Ic. Sel. iii. 21, t. 35 (1837). *Rhyssopterys* Wittst. Etym. Handwörterb. ed. 2, 764 (1856). *Rhyssopteryx* Dalla Torre et Harms, Gen. Siphonog. 263 (1901). *Ryssopteris* Post et Kuntze, Lexic. Gen. Phan. 493 (1903).—The original spelling *Ryssopterys* must be retained under Art. 24. For the first half of the name, compare the case of *Rynchospora*, and for the second half, that of *Aspidopterys*.

Sarcolaena *Thou.* Hist. Vég. Isles Afr. ed. 2, 37, 46, tt. 9, 10 (1805). *Sarcochlaena* Spreng. Syst. ii. 594 (1825).—The derivation given by Du Petit Thouars is as follows: "Nomen: Σαρξ σαρκος; caro, carnosus: χλαινα; latine, *laena*, tunica exterior". There is thus no doubt that Thouars *deliberately* composed *Sarcolaena* from "laena" instead of "chlaena", and Sprengel's alteration of the spelling is contrary to the Rules.

Satureja *L.* Sp. Pl. ed. 1, 567 (1753); Gen. Pl. ed. 5, 247 (1754). *Satureia* Mill. Gard. Dict. Abridg. (1754).—Linné cited "*Satureja* Riv." and "*Satureja* T." under *Thymus* in Gen. Pl. ed. 1, 168 (1737), and used the spelling *Satureja* in synonymy of species of *Clinopodium*, *Thymus* and *Melissa* in Hort. Cliff. 305, 306, 308 (1737). In 1742, however, when he recognised an independent genus under that name he published it as *Satureia*, ascribing it to Rivinus and Tournefort (Gen. Pl. ed. 2, 266). In 1748 he employed both spellings, *Satureia* as the generic heading, *Satureja* for the species and their synonyms, and in the Index. From 1753 onwards, however, he appears to have consistently employed the form *Satureja*, which occurs in Syst. Nat. ed. 10, 1095 (1759), Sp. Pl. ed. 2, 793 (1763), Gen. Pl. ed. 6, 288 (1764), and Syst. Nat. ed. 12, 389 (1767). Hence that form may be regarded as his deliberate choice.

In most Latin dictionaries (e.g. Lewis and Short (1927), p. 1635), the name appears as *Satureia*, but the spelling *Satureja* was accepted by Ascherson and Graebner (Fl. Nordostdeutsch. Flachl. 592: 1899), who laid great stress on correct classical form.

The generic name appeared as *Satureia* in Tragus, New Kreütter Buoch, fol. x, verso (1539), Comment. i. 44 (1552), Fuchs, Hist. 304 (1542), Dodoens, Cruydeboeck, p. cclxii (1554), Pena et Lobel, Stirp. Advers. 182 (1571), C. Bauhin, Pinax, 218 (1623), J. Bauhin, Hist. iii. 272 (1651), Ray, Hist. i. 518 (1686), and Tournefort, Instit. i. 197 (1700).

The spelling *Satureja*, however, was employed by Rivinus, Pl. Fl. Irreg., Monopet. fol. D 2, verso, ll. 22, 23, t. 44 (1690), whose figures are cited by Linné as the basis of the genus *Satureia* (1742).

Satureja was used also by Boerhaave, Ind. Alt. Hort. Lugd.-Bat. i. 161 (1720), and Royen, Fl. Leyd. Prodr. 324 (1740).

It is evident from the preceding account that the spelling *Satureja* contains no orthographic error on the part of Linné, and that it was deliberately chosen by him in 1753-54. Hence it should be accepted under Art. 24.

Saurauia *Wittst.* Etym. Handwörterb. ed. 2, 787 (1856). *Saurauja* Willd. in Neue Schr. Ges. Naturf. Freunde, Berlin, iii. 407, t. 4 (1801). *Sauravia* Spreng. Anleit. ed. 2, ii. 818 (1818). *Sauraua* Post et Kuntze, Lexic. Gen. Phan. 502 (1903).—According to Wittstein (Etym. Handwörterb. ed. 2, 787 : 1856) the genus was named in honour of "Graf Fr. von Saurau," whose name might be latinized as "Saurauius." Gilg (Engl. et Prantl, Nat. Pflanzenfam. iii. Abt. 6, 126, footnote : 1893) states that Willdenow in his herbarium always wrote the name as *Saurauia*. Hence *Saurauja* may be regarded as a typographical error, and the spelling *Saurauia* published by Wittstein may be attributed to Willdenow.

Schizolaena *Thou.* Hist. Vég. Isles Afr. ed. 2, 43, 46, t. 12 (1805). *Schizochlaena* Spreng. Syst ii. 595 (1825).—Derived by Thouars from "Σχίζω *lacerus* et *laena*, ab involucro lacero." The cases of *Leptolaena*, *Rhodolaena* and *Sarcolaena* fall in the same category.

(1) Sclerolaena *R. Br.* Prodr. 410 (1810).—Name formed from σκληρός, hard, and λαῖνα, (a variant of χλαῖνα), a cloak.

(2) Scleroolaena *Baill.* in Adansonia, x. 236 (1872).—The generic name was apparently formed by Baillon from σκληρόω, harden, and λαῖνα, a cloak. In order to avoid confusion with *Sclerolaena* R. Br., Baillon replaced *Scleroolaena* by *Xyloolaena* (q. v).

Stigmaphyllon *A. Juss.* in St. Hil. Fl. Bras. Merid. iii. 48, tt. 170, 171 (1832). *Stigmatophyllum* Spach, Hist. Veg. Phan. iii. 153 (1834). *Stigmatophyllon* Meissn. Gen. i. 55, ii. 39 (1837). *Sigmatophyllum* D. Dietr. Syn. Pl. ii. 1587 (1840). *Stigmaphyllum* Wittst. Etym.-Bot. Handwörterb. ed. 2, 845 (1856).

Stipa *L.* Sp. Pl. ed. 1, 78 (1753) ; Gen. Pl. ed. 5, 34 (1754). *Stupa* Aschers. Fl. Brandenb. 812 (1864).—The accepted spelling of the classical Latin word was stuppa, less correct forms being stupa and stipa. Under Art. 24, however, Linné was at liberty to select any one of them, if he so pleased, and his choice of *Stipa* cannot be reversed.

Stuartia *L'Hérit.* Stirp. 153 (1785). *Stewartia* L. Sp. Pl. ed. 1, 698 (1753) ; Gen. Pl. ed. 5, 311 (1754).—The generic name was originally published by Linné as *Stewartia* (Act. Ups. 1741, 79, t. 2 : 1746), but was altered by Catesby (Carol., App. 13, t. 13 : 1743) to *Steuartia*. Linné, however, adhered to the spelling *Stewartia* in Sp. Pl. ed. 1 and 2, Gen. Pl. ed. 5 and 6, Syst. Nat. ed 10 and 12. Miller, Gard. Dict. ed. 6, App. (1752) at first accepted the spelling

given by Catesby, but in ed. 7 (1759) adopted *Stewartia*. L'Heritier (Stirp. 153; 1785) altered the spelling to *Stuartia* on the ground that the name commemorated John Stuart, third Earl of Bute (1713-1792).

The form *Stuartia* is accepted in Index Kewensis and by Post et Kuntze, Lexic. Gen. Phan. (1903). Dalla Torre et Harms, Gen. Siphonog. 317 (1901), however, adopted *Stewartia*.

There seems to be no doubt that Linné erroneously supposed that the surname of the Earl of Bute was Stewart, not Stuart. The generic name *Stewartia* accordingly contains an *unintentional* orthographic error, which may be corrected under the provisions of Art. 57.

Swertia *L.* Sp. Pl. ed. 1, 226 (1753); Gen. Pl. ed. 5, 107 (1754). *Svertia* Adans. Fam. ii. 503 (1763). *Sweertia* Koch, Syn. 205 (1837). —The genus was named in honour of Emanuel Sweert, author of "Florilegium amplissimum et selectissimum" (1620), who latinized his own name as Sweertius. As the "ee" was not suitable in a Latin word, Linné rendered Sweert's name as Swertius, omitting an "e" (Biblioth. Bot. 29: 1751), and published the generic name as *Swertia*. The case is comparable to that of *Valantia* (q. v.).

Symphoricarpos *Boehm.* in Ludw. Gen. ed. 2, 35 (1760); *Adans.* Fam. ii. 157 (1763); Juss. Gen. 211 (1789). *Symphoricarpa* Neck. Elem. i. 129 (1790). *Symphoricarpus* H. B. K. Nov. Gen. iii. 424 (1818). *Symphorocarpus* Post et Kuntze, Lexic. Gen. Phan. 545 (1903). *Symphorocarpos* Post et Kuntze, l.c. sub *Symphoricarpa*. —Boehmer was at liberty to adopt the name *Symphoricarpos* as spelt by Linné (Gen. Pl. ed. 1, 380: 1737). He was not obliged to give it the Latin termination -us, nor to replace the connecting vowel "i" by "o".

Tetrapteris *Cav.* Diss. ix. 433 (1790). *Tetrapterys* A. Juss. in Ann. Sc. Nat. sér. 2, xiii. 261 (1840). *Tetrapteryx* Dalla Torre et Harms, Gen Siphonog. 263 (1901)—see the remarks under *Triopteris*.

Thuja *L.* Sp. Pl. ed. 1, 1002 (1753); Syst. Nat. ed. 10, 1274 (1759); Sp. Pl. ed. 2, 1421 (1763); Gen. Pl. ed. 6, 1075 (1764); Syst. Nat. ed. 12, 633 (1767). *Thuya* L. Gen. Pl. ed. 5, 435 (1754). *Thya* Adans. Fam. ii. 480 (1763). *Thuia* Scop. Introd. 353 (1777). *Thyia* Aschers. Fl. Brandenb. 886 (1864).—The three spellings *Thuia*, *Thuya* and *Thuja* were in use before 1753. For example, *Thuia* was employed by Dalechamps, Hist. i. 59 (1587); *Thuya* was used by C. Bauhin, Pinax, 487 (1623), Tourn. Inst. i. 586 (1700), Boerhaave, Ind. Alt. Pl. Hort. Lugd.-Bat. ii. 180 (1720), Linn. Gen. Pl. ed. 1, 378 (1737), and Royen, Fl. Leyd. Prodr. 87 (1740); *Thuja* was adopted in Linn. Hort. Cliff. 449 (1737), and Hort. Upsal. 289 (1748).

As Linné employed the two forms *Thuja* and *Thuya* in 1753-54, and afterwards consistently adhered to *Thuja*, that spelling may be regarded as his choice and should be retained under Art. 20.

Satureja was used also by Boerhaave, Ind. Alt. Hort. Lugd.-Bat. i. 161 (1720), and Royen, Fl. Leyd. Prodr. 324 (1740).

It is evident from the preceding account that the spelling *Satureja* contains no orthographic error on the part of Linné, and that it was deliberately chosen by him in 1753-54. Hence it should be accepted under Art. 24.

Saurauia *Wittst.* Etym. Handwörterb. ed. 2, 787 (1856). *Saurauja* Willd. in Neue Schr. Ges. Naturf. Freunde, Berlin, iii. 407, t. 4 (1801). *Sauravia* Spreng. Anleit. ed. 2, ii. 818 (1818). *Sauraua* Post et Kuntze, Lexic. Gen. Phan. 502 (1903).—According to Wittstein (Etym. Handwörterb. ed. 2, 787 : 1856) the genus was named in honour of "Graf Fr. von Saurau," whose name might be latinized as "Saurauius." Gilg (Engl. et Prantl, Nat. Pflanzenfam. iii. Abt. 6, 126, footnote : 1893) states that Willdenow in his herbarium always wrote the name as *Saurauia*. Hence *Saurauja* may be regarded as a typographical error, and the spelling *Saurauia* published by Wittstein may be attributed to Willdenow.

Schizolaena *Thou.* Hist. Vég. Isles Afr. ed. 2, 43, 46, t. 12 (1805). *Schizochlaena* Spreng. Syst ii. 595 (1825).—Derived by Thouars from "Σχιζος *lacerus* et *laena*, ab involucro lacero." The cases of *Leptolaena*, *Rhodolaena* and *Sarcolaena* fall in the same category.

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Thuja *L.* Sp. Pl. ed. 1, 1002 (1753) ; Syst. Nat. ed. 10, 1274 (1759) ; Sp. Pl. ed. 2, 1421 (1763) ; Gen. Pl. ed. 6, 1078 (1764) ; Syst. Nat. ed. 12, 633 (1767). *Thuya* L. Gen. Pl. ed. 5, 435 (1754). *Thya* Adans. Fam. ii. 480 (1763). *Thuia* Scop. Introd. 353 (1777). *Thyia* Aschers. Fl. Brandenb. 886 (1864).—The three spellings *Thuia*, *Thuya* and *Thuja* were in use before 1753. For example, *Thuia* was employed by Dalechamps, Hist. i. 59 (1587) ; *Thuya* was used by C. Bauhin, Pinax, 487 (1623), Tourn. Inst. i. 586 (1700), Boerhaave, Ind. Alt. Pl. Hort. Lugd.-Bat. ii. 180 (1720), Linn. Gen. Pl. ed. 1, 378 (1737), and Royen, Fl. Leyd. Prodr. 87 (1740) ; *Thuja* was adopted in Linn. Hort. Cliff. 449 (1737), and Hort. Upsal. 289 (1748).

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French Guiana, and the Samydaceous *Euceraea* which has only been recorded hitherto from Amazonian Brazil.

It frequently happens that the nearest affinities of these specimens from British Guiana are species collected by Spruce on the distant Rio Uaupes, but this is not surprising when it is remembered how little collecting has yet been done in the intervening region. Our present knowledge of the distribution of plants in the great forest areas of tropical South America is shown to be hopelessly imperfect by the discovery by Prof. Ducke of Uaupes and other supposed western Amazonian species right at the mouth of the Amazons in the district of Pará. In connexion with the flora of British Guiana, the recent studies of " hylaea " by Ducke, comprising descriptions of scores of new species and recensions of some of the genera as well as general notes on distribution, deserve constant and careful attention, and the following remark of his is significant : " The least known region of all ' hylaea ' to-day is still without doubt British Guiana, the flora of the central and southern parts of which is one of the most interesting in the world."

Catostemma Altsoni *Sandwith* sp. nov. [Bombacaceae] ; a *C. fragrante* Benth. praecipue floribus cum omnibus partibus suis multo majoribus, foliis longioribus differt.

Arbor 12 m. alta ; ramuli cortice glabro nigrescente, 7-12 mm. diametro, juniores canaliculati, seniores cicatricibus foliorum delapsorum saepe ad 7 mm. diametro notati. *Folia* versus apicem ramulorum juniorum aggregata magna, elliptico-oblonga, apice rotundata et mucrone ut in *C. fragrante* subtus recurvato, basi rotundata vel majora cuneata, 19-24 cm. longa, 7-9 cm. lata, summa decrescentia, glabra, integra, crasse coriacea, utrinque subnitida, siccitate fusco-olivacea, costa nervisque primariis in utroque latere costae circiter 10 utrinque et praecipue subtus valde prominentibus ; petioli glabri, crassi, valde canaliculati, 2-5.5 cm. longi, 2.5-3.5 mm. diametro, versus laminam incrassati ; stipulae anguste acuteque triangulares, glabrae, nigricantes, ad 7.5 mm. longae, basi circiter 3 mm. latae. *Flores* in axillis (saepe in ramulis nudis defoliatis) complures ; alabastra pyriformia, 8-10 mm. longa, ad 7 mm. lata, pedicellis vulgo 1 cm. longis ; pedicelli sub anthesi ad 4.7 cm. longi atque 1.5 mm. diametro, indumento *C. fragrantis* furfuraceo, bracteis bracteolisque squamiformibus similibus. *Calyx* extra ut in *C. fragrante* dense stellato-furfuraceus ; tubus 5 mm. longus, 6.5 mm. latus, fissus in segmenta 3 inaequalia, ovata, acuta vel obtusa, 1 cm. longa, 5-8 mm. lata. *Petala* anguste obovato-oblonga, apice cucullata, 2.3 cm. longa, ad 7 mm. lata. *Stamina* filamentis 1.4 cm. longis. *Ovarium* ampullaceum, ovoideum, acuminatum, in stylum paulatim transiens, dense stellato-pilosum, 6-7 mm. longum, 4.5-6 mm. diametro, disco calycino relicto 5 mm. lato insidens ; stylus glaber, 1.2 cm. longus ; stigmata glabra, ad 6 mm. longa ; ovula 1 mm. longa, 0.6 mm. lata. *Fructus* (unus solus immaturus visus) obovato-oblongus, dense minute ferrugineo-furfuraceus, fere 5 cm.

longus atque 2 cm. latus, pedicello crasso 5.5 cm. longo atque 3 mm. diametro.

British Guiana: by water, Macreba Falls, Kurupung River, September 1925, *Altson* 391 (type in Herb. Kew.). "Tree 40 feet high. Vernaculars: (1) Ge-ma-na (Acawai Dialect), (2) Cou-yami (Arawak Dialect)."

An excellent addition to this hitherto monotypic genus. Its position in Bombacaceae, next to *Scleronema* Benth., is established by K. Schumann in Engl. and Prantl, Pflanzenfam. Nachtr. ii. 42-43 (1908). Bakhuizen van den Brink does not seem to be justified in uniting *Catostemma* and *Scleronema* (Bull. Jard. Bot. Buitenzorg, 1924, ser. iii. vi. 217-8), and his remarks about the affinities of *C. fragrans* and *S. Spruceanum* suggest that he has not seen material of either species. He makes no mention whatever of the character of the stigmata.

Sterculia guianensis *Sandwith* sp. nov. [Sterculiaceae-Sterculieae]; affinis *S. Ivira* Sw. (*S. pruriens* K. Schum.), foliis longissimis lanceolatis longe acuminatis glabris opacis, inflorescentia magis pauciflora, floribus laxe dispositis longius pedicellatis, gynophoro furfuraceo differt.

Arbor parva, 9-12 m. alta, ramulis summis 6-7 mm. diametro. *Folia* magna longissima, lanceolata, apice vulgo ad 1-1.5 cm. acuminata, basi attenuata rotundata vel fere cuneata, 11-33.5 cm. longa, 3.5-9.5 cm. lata, integerrima, chartacea vel tenuiter coriacea, utrinque satis opaca, supra glabra olivacea, subtus glabra pallidiora fere glaucescentia, costa nervisque primariis in utroque latere costae circiter 12-18 utrinque prominentibus, rete venularum subtilissimo utrinque conspicuo nec ut in *S. Ivira* fere occulto; petiolus teres, laevis, glaber vel parcissime pilosulus, apice basique incrassatus, 1-10.5 cm. longus, ad 2.5 mm. diametro. *Paniculae* apice ramulorum complures aggregatae, laxae, satis pauciflorae, speciosae, ad 18 cm. longae, 5-7.5 cm. latae, passim indumento minuto albo stellato-furfuraceo indutae; rami primarii vulgo 3-flori 3-4 cm. longi; pedicelli sub flore aperto 0.7-1.5 cm. longi; bracteae basi inflorescentiarum castaneae, triangulares, saepe longe acuminatae, ad 7 mm. longae, ad 3.5 mm. latae, glabrae, basi apice et nonnunquam marginibus villosis exceptis; bracteolae caducae, 2-3 mm. longae. *Flores* extra minute satis dense stellato-pilosuli, intus etiam basi excepta pilis longis simplicibus adpressis immixtis, 1.2-1.6 cm. longi, applanati ad 2.5 cm. diametro; lobi calycini trinervii inaequales, triangulares vel ovato-lanceolati, acuti, 7-11 mm. longi, basi ad 5 mm. lati. *Flos* ♂ gynophoro curvato, nutante, basi incrassato, furfuraceo-pilosulo, 7 mm. longo; stamina 10, tubo stamineo cupuliformi brevi cum indumento simili, circiter 0.75 mm. longo, 1.5 mm. lato; carpidia rudimentaria pilosula. *Flos* ♀ gynophoro simili; tubus stamineus cupuliformis, furfuraceo-pilosulus, 1-1.5 mm. longus, fere ad 2.5 mm. latus; ovarium globoso-ovoideum, furfuraceo-pilosulum, 1.5 mm. longum ita tubum

stamineum paulo tantum superans, 2 mm. diametro ; stylus deorsum curvatus, furfuraceo-pilosulus, cum stigmate capitato quinquelobato glabro 3-3.5 mm. longus. *Fructus* non visus.

British Guiana. Membaru Trail, on lower slopes of Kurupung Mountains, 600 feet, September 1925, *Altson* 379 (type in Herb. Kew). "A small tree, 30 ft. high. Flowers red and white." Dense upland forest, Tumatumari, June-July 1921, *Gleason* 442 (with leaves evidently belonging to this species, and black seeds about 2 cm. long and 1.2 cm. in diameter).

Spiranthera guianensis *Sandwith* sp. nov. [Rutaceae-Cusparieae] ; a *S. odoratissima* St. Hil. petiolis multo longioribus, foliolis longe petiolulatis plerumque multo majoribus obovatis vel obovato-ellipticis apice fere cuspidatis ad basim acute cuneatam longe attenuatis, cum nervis paucioribus atque magis distantibus, filamentis multo longioribus, praecipue disco omnino dissimili statim distinguitur.

Arbor parva, 6-7 pollices diametro ; ramuli obscure pilosuli, cortice nitidulo purpureo-fusco, sub inflorescentia 4-5 mm. diametro. *Folia* trifoliolata, petiolo cum cortice simili longissimo 10-14 cm. longo, 1.5-2.5 mm. diametro ; foliola obovata, obovato-elliptica vel fere rhomboideo-elliptica, apice satis abrupte acuminata fere cuspidata, basi in petiolulum pubescentem 5-15 mm. longum longe acute attenuata, 9-20 cm. longa, 4.7-9.5 cm. lata, textura atque colore eorum *S. odoratissimae* sed subtus per costam nervosque et praesertim in tota facie sparse sed regulariter minute adpresse pilosula, nervis in utroque latere costae 7-9 in foliolis minoribus 1-1.5 cm. in foliis majoribus saepe 2-3 cm. distantibus. *Inflorescentia* ut in *S. odoratissima* late thyrsoidea ramis nigrescentibus pubescentibus, cum bracteis prophyllis indumento formaque alabastrorum simillimis ; pedunculi cymarum inferiores ad 7 cm. longi ; pedicelli nonnunquam ad 1.5 cm. longi. *Calyx* cinereo-puberulus, dentibus 1-2 mm. longis. *Petala* adulta ad 5 cm. longa, ad 3.5 mm. lata, indumento eorum *S. odoratissimae*. *Stamina* filamentis inferne pilosulis adultis saepe fere ad 6 cm. longis ; antherae in alabastro ad 8 mm. longae. *Ovarium* forma indumentoque ejus *S. odoratissimae* sed saepius angustius, 3-6 mm. altum, apice 2-2.5 mm. diametro ; discus fusco-nigrescens inconspicuus humilis ad 1 mm. altus dentibus calycinis fructiferis brevior vel vix aequilongus integer truncatus et fundo stipitis ovarii arcte adpressus, neque ut in *S. odoratissima* castaneus altus conspicue exsertus apice dentatus et ovarii stipitem laxe vaginans ; stylus inferne pilosulus, adultus vulgo 4.5-5 cm. longus. *Fructus* non visus.

British Guiana : Weri-werai-kuru creek, Essequibo River, October 16th, 1922, *Hohenkerk* 853 (type in Herb. Kew.). "Small tree only 6 or 7 in. in diameter. Petals cream, long and narrow, like those of a waterlily, curved backwards." Demerara River, May 1887, *Jenman* 3929. Vernacular name (fide Jenman) "Whyoaballi."

A very distinct species, remarkably like *S. odoratissima* in general respects but at once distinguished by the shape of the large leaflets and the long petiole, and especially by the peculiar floral disk which resembles that of the allied genus *Almeidea*. The measurements of the floral parts of *S. odoratissima* which are given by Engler in Mart. Fl. Bras. xii. ii. 88 are very inexact, but an examination of numerous specimens shows that the filaments are always shorter than the style, whereas in *S. guianensis* the very long filaments of the fully-developed flowers usually exceed it.

Protium Altsoni *Sandwith* sp. nov. [Burseraceae] ; inter species folia 4–6-juga atque ovarium adpresse pilosum ferentes, inflorescentiis brevissimis congesto-thyrsoideis, floribus pedicellatis, ovario minuto in disco pulverulento fere omnino immerso, stylo nullo distinguitur.

Arbor elata, ramulis summis pubescentibus lenticellatisque 3-4 mm. diametro. *Folia* alterna, imparipinnata, 4–6-juga, 20-35 cm. longa ; petiolus supra canaliculatus, dense breviter pubescens, basi incrassatus, 3-5 cm. longus, ad 2 mm. latus ; rhachis similis sed subteres vel leviter angulata, internodiis 2-4 cm. longis ; petioluli supra canaliculati costa folioli per canaliculum decurrente, pubescentes, 6-9 mm. longi ; foliola opposita, oblonga vel rarius elliptica, apice abrupte ad 1.5 cm. acuminata, basi obtusa cuneata obliqua, 6-11.8 cm. longa, 2.4-4 cm. lata, utrinque glaberrima vel costa supra nonnunquam pilosula, integra, chartacea, nervis primariis in utroque latere costae circiter 15 subparallelis versus marginem sursum arcuatis atque anastomosantibus, rete venularum subtus satis prominente. *Inflorescentia* axillaris, brevissima, congesta, thyrsoidea, 1-2.5 cm. longa, igitur petiolo multo brevior, dense adpresse pubescens ; bracteolae minutae, ovatae ; pedicelli 1-2 mm. longi. *Calyx* cupularis late acute sed non profunde 5-dentatus, glabrescens vel extra pilosus. *Petala* 5 ovato-lanceolata, ad 2.7 mm. longa, 1.3 mm. lata, utrinque pulverulenta puberula, extra etiam nonnunquam sparse pilosa, marginibus albo-furfuraceis. *Stamina* 10, filamentis glabris 0.75-1 mm. longis ; antherae ad 0.5 mm. longae. *Ovarium* minutum globosum, adpresse pilosum, 1 mm. longum atque diametro, stylo nullo, stigmate 5-lobo coronatum, in disco siccitate pulverulento margine undulato-sinuato fere omnino immersum.

British Guiana : in forest bordering savannah, near Paramacutoi Savannah, Ireng District, 2300 ft., May 1926, *Altson* 529 (type in Herb. Kew.). " A tall tree. Calyx green. Corolla green. Anthers brown. Stigma dark-brown, sessile. A Hiawa gum tree."

Clathrotropis paradoxa *Sandwith* sp. nov. [Papilionaceae-Sophoreae] ; ab omnibus speciebus adhuc repertis filamentis basi leviter sed manifeste connatis differt ; aliter *C. grandiflorae* (Tul.) Harms (cujus legumen ignotum) affinis, inflorescentiis multo longioribus, floribus minoribus, petiolis brevioribus differt ; quoad legumen *C. brachypetalae* (Tul.) Kleinh. evidenter affinis.

Arbor ramulis summis versus apicem glabris laevibus 4-5 mm. diametro ; internodia summa 1.5-2 cm. longa. *Folia* alterna, imparipinnata, 2-3-juga, pari summo sub foliolo terminali nonnunquam in stipellas reducto ; stipulae subulatae, glabrae, 5-8 mm. longae ; petiolus glaber, nigrescens, teres, basi incrassatus, 3.5-6 cm. longus, 2 mm. diametro ; rhachis similis, internodiis inferioribus 4-5 cm. longis ; petioluli crassi, cortice corrugato, glabri, 7-8 mm. longi, 2-2.5 mm. crassi ; foliola evoluta 5-7, opposita, oblonga, obovato-oblonga vel elliptico-ovata, apice satis breviter retuse acuminata, basi saepius attenuata sed demum rotundata, 10-16.7 cm. longa, 4.5-7 cm. lata, glabra, integra, coriacea, supra olivacea satis nitida, subtus pallidiora subglaucescentia, nervis primariis in utroque latere costae 10-12 supra immersis subtus cum costa prominentibus. *Inflorescentia* axillaris paniculata, adulta longissima, folium subtendens aequans vel etiam superans, ad 30 cm. longa, ramis arcuato-adscendentibus multifloris satis laxifloris inferioribus 15-23 cm. longis, tota dense adpresse puberula pubescentia pallide fusca vel juventute purpureo-fusca ; flores in ramis racemosi, pedicellis sub flore adulto 2-4 mm. longis ; bracteae subulatae, 1-1.5 mm. longae ; bracteolae calyci adpressae similes, ad 1.2 mm. longae. *Calyx* indumento simili ad 6.5 mm. longus, tubo ad 5 mm. lato, labio superiore fere rectangulato 3 mm. longo 4 mm. lato apice ad 0.8 mm. lobato, dentibus labii inferioris acute triangularibus 2-2.3 mm. longis ad 2.5 mm. latis. *Corolla* glabra, alba, fauce purpurea, petalis conspicue venosis, 1-1.2 cm. longa ; vexillum late obovatum, exauriculatum, cum ungue 2.5 mm. longo ad 1.2 cm. longum, 1.2 cm. latum, apice profunde ad 2 mm. emarginatum ; alae obovato-spathulatae, exauriculatae, 9-10 mm. longae, 5 mm. latae ; petala carinae obovato-spathulata, exauriculata, dorso leviter adhaerentia et facile sejungentia, 6-6.5 mm. longa, 3 mm. lata. *Stamina* 10, filamentis basi tubi calycis breviter sed manifeste vix ad 1 mm. connatis, glabris, subaequalibus, 5-6 mm. longis, 5 alternis quam 5 longioribus circiter 0.5 mm. brevioribus ; antherae ad 0.5 mm. longae. *Ovarium* sessile, dense fusco-villosum, in flore nondum marcescente 3 mm. longum, 1 mm. diametro ; stylus sursum glabrescens, apice recurvus, cum stigmate terminali 2.5 mm. longus ; ovula 4. *Legumen* late obovato-lanceolatum, crassum, lignosum, planum, dense ferrugineo-tomentosum, 13-15 cm. longum, 4.5-6 cm. latum, valvatim elastice dehiscens ; semina 4 valde compressa, oblonga, 2-2.5 cm. longa, ad 1 cm. lata, funiculis conspicuis pendentia.

British Guiana : by water, Kamakusa, Mazaruni River, 180 feet, August 1925, *Abraham* 408 (type in Herb. Kew.). " Tree. Flowers white with pink blotches, slightly perfumed. Starch is prepared from the seed and eaten as food. Vernacular, Dakamballi (Arawak Dialect)." By water, Kurupung River, 200 feet, September 1925, *Altson* 402. " Tree. Calyx brown-purple. Corolla white with purple throat. Pod flattened, brown-tomentose. Vernaculars : (1) Tira-ek (Acawai Dialect), (2) Iron Mary (Creole)."

This has the facies, leaves, inflorescence and floral characters of the five other species which have been placed in this genus, differing only in the slightly connate filaments. It agrees very well in many points with the description of *C. grandiflora* (Tul.) Harms, but differs markedly in the points given above. It has the long lax inflorescence of *C. nitida* (Benth.) Harms, but differs from it in the strong indumentum of the ovary—a character shared by all the other species—the larger flowers, and the remarkable long 4-seeded pods. *C. flava* Ducke, which Ducke now makes the type of his new genus *Ormosiopsis*, has a very much shorter inflorescence, larger and yellow flowers and a short 1-2-seeded pod. *C. surinamensis* Kleinh. has more numerous narrower lanceolate leaflets, a much shorter inflorescence, and yellow flowers; the pod is unknown. There remains *C. brachypetala* (Tul.) Kleinh., which has recently been transferred from *Diplotropis* on the evidence of floral and fruiting characters. Though less like *C. paradoxa* in general appearance than all the other species, the pod of *C. brachypetala* provides a striking confirmation of its generic affinity. This, in *Jenman* 4921, is black and glabrescent, but roughly of the same shape and dimensions as that of *C. paradoxa*, being 15-16 cm. long and 5-6 cm. broad, as well as 4-seeded. It is possible that a further definition of the taxonomic relationship of the species of this genus and those of *Diplotropis*, perhaps involving a revised generic division, will prove to be necessary in the future when the fruit of all the species has been collected; in the event of any such division, *C. paradoxa* and *C. brachypetala* will probably stand together in the same genus. For the most recent conception of *Clathrotropis*, and notes on its relationship with *Diplotropis*, see Kleinhoonte in Rec. Trav. Bot. Néerl. xxii. 394-398 (1925). Should *Clathrotropis* be restored at some future date to its original position as a section of *Diplotropis*, the present species will have to be named *Diplotropis paradoxa* mihi; if to *Ormosiopsis*, *Ormosiopsis paradoxa* mihi, but as Kleinhoonte has shown, the characters assigned to *Ormosiopsis* are in most instances typical of Harms' original species of *Clathrotropis*.

Dicymbe Altsoni *Sandwith* sp. nov. [Caesalpiniaceae-Sclerolobieae]; a *D. corymbosa* Spruce ex Benth. foliolis minoribus 5–6-jugatis, alabastris pedicellisque minoribus tenuioribus statim distinguitur.

Arbor magna, 27 m. alta, ad 15 m. nuda, cortice crasso rubrofusco, ramulis summis minute adpresse pubescentibus 3-4 mm. diametro; internodia superiora saepe 5-7 cm. longa. *Folia* alterna, paripinnata, 5-6-juga; petiolus adpresse pubescens, basi incrassatus, 1.7-3 cm. longus, 1.5 mm. diametro; rhachis similis, internodiis 1.8-3.3 cm. longis; petiolulus pilosulus, 4-6 mm. longus; foliola opposita, ovato-lanceolata vel lanceolato-elliptica, apice attenuata atque longe ad 2 cm. acuminata, basi plerumque rotundata, 7.5-14 cm. longa, 2.8-4.5 cm. lata, integra, supra glabra olivacea, subtus sub lente minutissime sparse sed regulariter adpresse fulvo-pilosula, coriacea, utrinque costa conspicua sed nervis primariis inconspicuis,

rete tamen venularum intricatissimo subtus manifesto ; stipulae delapsae. *Inflorescentia* axillaris atque terminalis, racemosa vel corymboso-paniculata ramis longis cum floribus racemosis, 8-14 cm. longa, tota dense fulvo-pubescens ; bracteae delapsae ; pedicelli flexuosi, 1-2.5 cm. longi, ad 1.5 mm. tantum diametro ; alabastra bracteolis omnino inclusa, ovoidea, acuta, cum pubescentia densa siccitate sericeo-subnitente metallicolori, 1-1.5 cm. longa, ad 1.1 cm. lata ; bracteolae sub flore aperto cymbiformes, late ovato-ellipticae, 1.5-1.8 cm. longae, applanatae ad 1.5 cm. latae, extra sericeae, intus margine crasso conspicuo excepto glabrae. *Calyx* tubo crasso discifero brevi 7 mm. lato ; sepala 4 flava, obovato-oblonga, 1.9-2 cm. longa, 1-1.2 cm. lata, duo alterna angustiora ad 8 mm. lata, extra dense adpresse sericeo-pilosa, intus glabra. *Petala* 5 flava, extra plus minusve adpresse sericeo-pilosa, intus glabra ; in alabastro 4 minora obovato-spathulata in unguem brevem attenuata, 1.7 cm. longa, ad 1.2 cm. lata, quintum majus fere rotundato-quadratum basi latissima ad 1.8 cm. latum ; in flore aperto mox lacerata, 4 minora 2.3-2.8 cm. longa, ad 1.6 cm. lata, quintum majus verosimiliter ad 2.5 cm. latum. *Stamina* 10 libera, filamentis basi incrassatis pilosis, versus apicem inflexis, inaequalibus, 0.7-1.7 cm. longis ; antherae ad 7 mm. longae. *Ovarium* in fundo calycis dense pilosum, circiter 8 mm. longum, ad 3 mm. diametro ; stylus glaber, cum stigmate ad 1.6 cm. longus ; ovula in ovario unico dissecto 8. *Fructus* non visus.

British Guiana : common in forest on hills in red soil, Anandabaru, Kopinang River, 2000 ft., April 1926, *Altson* 459 (type in Herb. Kew.). " A large tree, 90 ft. high, 50 ft. up to the first branches. Bark thin, red-brown : sapwood white ; heartwood reddish. Flowers borne at the summit. Bracteoles 2, thick, yellow ; calyx 4, yellow ; petals 5, yellow ; stamens free, 10 ; anthers versatile. Trunk tends to be fluted in old trees ; no buttresses. Vernacular name, Atuba (Patamona Dialect)."

Dicymbe has remained a monotypic genus since it was described by Spruce from material collected by him in 1852 near Panuré on the Rio Uaupes, and published by Bentham. The species then described, *D. corymbosa*, has recently been discovered in at least two localities in British Guiana, and the following material has been sent to Kew : *Hohenkerk* 757, collected on the Potaro-Essequibo railway survey ; and *Mackay* 896, collected at Camp No. 10, Mazaruni-Kuribrong Divide. The presence, therefore, in British Guiana of two very fine and strikingly distinct new species of this genus, though of exceptional interest, is hardly remarkable. The locality in which Mr. Altson discovered his new species—which he correctly identified as a *Dicymbe*—lies some twenty-five miles south-west of the Kaieteur Falls towards the Brazilian frontier, and he reports that it is abundant, if not dominant, there over a considerable area. Meanwhile a third species, collected by Jenman on the Potaro River, has been lying for years unnamed in the Kew Herbarium in

the cover of *Dicymbe*, where it was correctly placed by Mr. J. G. Baker, and is described below. It is noteworthy that whereas *D. Altsoni*, which has more numerous and smaller leaflets than its congeners, is a large tree reaching a height of ninety feet, the other two are comparatively small trees; *D. Jenmani* was noted as only "eight feet high or more," while *D. corymbosa* was said by Spruce to be normally from ten to fifteen feet in height and in rare instances to attain to thirty feet.

Dicymbe Jenmani *Sandwith* sp. nov. [Caesalpiniaceae-Sclerolobieae]; ab utraque specie adhuc cognita foliis 4-jugis foliolis subtus dense molliter tomentosis, petiolis internodiisque rhacheos dense patule tomentoso-pilosulis, inflorescentia tota dense patule fulvo-pilosa nec adpresse sericea, filamentis multo longioribus facile distinguitur.

Arbor parva ramulis summis 4-5 mm. diametro. *Folium* unicum visum paripinnatum, 4-jugum; petiolus densissime tomentoso-pilosulus, 5.3 cm. longus, 3 mm. diametro; internodia rhacheos indumento simili, fere 5 cm. longa, summum 4 cm. longum; petioluli similes, 5 mm. longi; foliola opposita, ea jugorum 3 inferiorum ovato-oblonga vel ovato-elliptica, jugi summi obovato-oblonga, apice longe acuminata, basi rotundata, in quoque jugo versus jugum summum paulatim crescentia, ea jugi imi 9 cm. longa, 4.6 cm. lata, jugi summi circiter 15 cm. longa, 6.2 cm. lata, integra margine revoluto, supra glabra, subtus molliter adpresse tomentosa, crasse coriacea, utrinque costa nervisque primariis in utroque latere costae ad 15 satis prominentibus, supra etiam reticulatione venularum satis prominente; stipulae delapsae. *Inflorescentia* axillaris, unica visa racemosa, fere 12 cm. longa, tota conspicue patule subnitide fulvo-pilosa; rhachis ad 3.5 mm. diametro; bracteae delapsae; flores apice corymbosi, pedicellis striato-sulcatis ad 3 cm. longis atque 3 mm. diametro; alabastra bracteolis omnino inclusa, ovoidea, acuta, ad 1.5 cm. longa, ad 1.1 cm. diametro; bracteolae sub flore aperto cymbiformes, ad 2.2 cm. longae, circiter 1.4 cm. latae, extra indumento fulvo supra commemorato, intus glabrae margine lato furfuraceo-sericeo excepto. *Calycis* sepala 4, in alabastro ovata 1.3-1.4 cm. longa, 7-9 mm. lata, in flore aperto oblonga vel obovato-oblonga ad 2.5 cm. longa, 0.8-1.2 cm. lata, extra per medium adpresse pilosa, ceterum saepius glabra. *Petala* 5 in alabastro ovata vel obovata 1.1-1.3 cm. longa, 7-8 mm. lata, in flore aperto pro rata angustiora spathulata 2.7-3.1 cm. longa, 8-10 mm. lata, extra margine satis angusto excepto dense satis longe atque laxe pilosa, pilis pallide ferrugineis quam eis sepalorum multo longioribus. *Stamina* 10 libera, filamentis in alabastro recurvatis 1.5 cm. longis, in flore aperto longissimis ad 4.2 cm. longis, dimidio inferiore satis dense longe pilosis, pilis eis petalorum similibus, sursum glabris; antherae 7-8.5 mm. longae. *Ovarium* dense pilosum, pilis eis petalorum similibus, ad 1.5 cm. longum, ad 4 mm. diametro; stylus superne

glaber, cum stigmate ad 2.8 cm. longus; ovula in ovario unico dissecto 10. *Fructus* non visus.

British Guiana: Kaieteur Savannah, Potaro River, September-October 1881, *Jenman* 1006 (type in Herb. Kew.). "A small tree, eight or more feet high."

Heterostemon mazarunensis *Sandwith* sp. nov. [Caesalpiniaceae-Amherstieae]; affinis *H. conjugato* Spruce, praesertim floribus duplo saltem minoribus, petalis dimidio superiore satis dense regulariter ciliatis, fructu maturo glabro differt.

Arbor 9 m. alta, ramulis nigrescentibus minute pilosulis versus apicem 2-3 mm. diametro; internodia saepius 5-8 cm. longa. *Folia* paripinnata bijuga sed primo visu unijuga; petiolus crassus cortice corrugato 6-7 mm. longus, 2.5-3.5 mm. diametro; jugum inferius fere suppressum, minutissimum, stipellaceum in petiolo basi jugi superioris insidens, foliolis 2-3 mm. longis, 0.5-1 mm. e petiolo exstantibus; jugi superioris foliola maxima petiolulis 3-5 mm. longis, anguste oblonga vel obovato-oblonga, apice subito acuminata fere cuspidata acumine 0.7-1.5 cm. longo, basi obliqua, latere postico in apicem petioluli attenuata atque cuneata, latere antico ad basim petioluli rotundata, 14-25 cm. longa, 4-6.3 cm. lata, glabra, integra, tenuiter coriacea, utrinque subnitida, supra olivacea, subtus pallidiora, nervis primariis in utroque latere costae circiter 12-15 cum nervis intermediis venulisque supra satis aequaliter conspicuis ac immersis subtus exstantibus reticulatis; stipulae subulatae, pilosulae, ad 8 mm. longae. *Racemi* dense minute pubescentes multiflori, ad 11 cm. longi; pedicelli indumento simili, 2-5 mm. longi; bracteae indumento simili, lanceolatae, 4 mm. longae; bracteolae indumento simili, fere in medio connatae, ovatae, 4-7 mm. longae, circiter 3 mm. latae. *Calyx* tubo dense pubescente 1-1.2 cm. longo, vix 2 mm. lato; calycis segmenta 4 extra dense pubescentia, obovato-linearia, obtusa, 1.7-2.4 cm. longa, ad 3.5 mm. lata. *Petala* 3 magna obovata, 2.2-3.2 cm. longa, ad 1.2 cm. lata, vix unguiculata, apice conspicue satis late emarginata, dimidio superiore ciliata; petala 2 rudimentaria minuta, membranacea, ovato-lanceolata, 1-3 mm. longa, ad 1 mm. lata, saepe apice ciliata. *Tubus staminеus* glaber 1.4-2 cm. longus, filamentis 9 exorientibus, trijugis lateralibus, tribus apicalibus, glabris vel pilis longis raris praeditis; antherae 3 majores 2.5-3 mm. longae, 6 minores circiter 1 mm. longae sed cum filamentis eis staminum perfectorum saepe aequilongis vel etiam longioribus. *Ovarium* suturis pubescentibus, faciebus glabrescentibus, 4-6 mm. longum, ad 1.7 mm. latum, stipite pubescente 3-4 mm. longo; stylus glaber, cum stigmate 1.4 cm. longus; ovula 4. *Legumen* fuscum, glabrum, 10-11 cm. longum, ad 3.3 cm. latum, stylo 3-4 mm. longo relicto, stipite circiter 7 mm. longo ad 3 mm. diametro.

British Guiana: in forest, Kamakusa, Mazaruni River, August 1925, *Abraham* 400 (type in Herb. Kew.). "A thin-stemmed tree 30 feet high. Flowers white; standard streaked with pink."

Heterostemon ingifolius *Sandwith* sp. nov. [Caesalpiniaceae-Amherstieae] ; affinis *H. conjugato* Spruce, forma foliorum perfecte bijugorum jugo inferiore plane evoluto magno conspicuo, rhachide inter juga longa, bracteolis caducis, ovario mox glabrescente differt.

Arbor ramulis nigrescentibus pilosulis versus apicem 2-3 mm. diametro ; internodium unicum visum fere 7 cm. longum. *Folia* paripinnata, perfecte bijuga ; petiolus crassus cortice corrugato, 5-6 mm. longus, 3-4 mm. diametro ; jugum inferius foliolis brevissime petiolulatis late ovatis, apice retusis, basi ut in aliis speciebus obliquis ; rhachis inter juga non alata, 4.3-5.3 cm. longa, 1.5-2 mm. diametro ; jugum superius foliolis brevissime petiolulatis obovato-ellipticis vel ellipticis, apice acuminatis acumine retuso circiter 1 cm. longo, in basim similiter obliquam attenuatis, 14-15.5 cm. longis, 5.8-6 cm. latis ; foliola omnia glabra, integra, chartacea, utrinque subnitida olivacea fere concoloria, utrinque sed praesertim subtus reticulata, nervis primariis foliolorum jugi superioris in utroque latere costae circiter 10-12 ; stipulae delapsae. *Racemus* unicus visus dense minute pubescens multiflorus, 5 cm. longus ; pedicelli indumento simili, 5 mm. longi ; bracteae basi racemi persistentes minutissime ciliatae, triangulares, acutae, 1.5-2 mm. longae, basi ad 2 mm. latae ; bracteolae omnes delapsae. *Calyx* tubo dense pubescente, 2.8-3 cm. longo, apice latiore excepto ad 2.5 mm. lato ; calycis segmenta 4 extra minute dense pubescentia, obovato-linearia, obtusa, inaequalia, 3.5-4.2 cm. longa, 0.5-1.1 cm. lata. *Petala* 3 magna obovata, ad 4.5 cm. longa, ad 1.7 cm. lata, unguiculata, apice inconspicue emarginata, dimidio inferiore pilis paucis longis raris ciliata, superiore glabra ; petala 2 rudimentaria lanceolata, apice ciliata, 4-5 mm. longa, 1 mm. lata. *Tubus staminеus* glaber, ad 3.2 cm. longus, filamentis 9 exorientibus, trijugis lateralibus, tribus apicalibus, glabris vel pilis longis raris praeditis ; antherae 3 majores 4-4.5 mm. longae, minores abortivae brevissimae filamentisque brevissimis. *Ovarium* suturis glabrescentibus, faciebus glabris, 0.6-1 cm. longum, 1-2.5 mm. latum, stipite pubescente 3-5 mm. longo ; stylus glaber, cum stigmate 3-4.5 cm. longus ; ovula 4. *Legumen* non visum.

British Guiana : in forest, Kamakusa, Mazaruni River, August 1925, *Abraham* 410 (type in Herb. Kew). " Flowers purple and white."

Cassia (Subgen. *Lasiorhegma*, Sect. *Apoucouita*) **pteridophylla** *Sandwith* sp. nov. [Caesalpiniaceae-Cassieae] ; affinis *C. adiantifoliae* Benth., foliolis brevioribus vulgo duplo angustioribus apice emarginatis subtus glabrescentibus, racemis pedicellisque brevioribus differt.

Arbor parva, trunco (in *Altson* 548) 10 cm. diametro, ramulis vetustioribus floriferis circiter 6 mm. diametro, hornotinis summis foliiteris alternis aggregatis dense pilosulis, 2-6 cm. longis, 0.75-1.5 mm. diametro ; internodia vulgo 3-8 mm. longa. *Folia* in

quoque ramulo alterna 4-10 sed inferiora plerumque delapsa, ad 12 cm. longa, vulgo 2-3 cm. lata, paripinnata, multijuga ; stipulae anguste lanceolatae, falcatae, glabrescentes, 2-3 mm. longae, circiter 0.5 mm. latae ; petiolus 3-4 mm. longus, dense pilosulus ; rhachis multo sparsius pilosula fere glabrescens, fortiter canaliculata, internodiis vulgo 3-4.5 mm. longis, apice ultra jugum summum paulum producta, glandula scutellata in latere superiore sessili sub jugum imum posita ; foliola 20-30-juga, opposita, oblonga, apice obtusa semper conspicue emarginata, basi obtusa inaequilatera, 1.2-2 cm. (vulgo ad 1.6 cm.) longa, 2-4.5 mm. (vulgo ad 3 mm.) lata, chartacea, supra nitida fusca glabra, subtus opaca ferruginea laevia glabrescentia sed pilis raris longiusculis sparsa, costa centrali nervisque supra satis prominentibus atque reticulatis. *Racemi* nodis ramulorum vetustiorum conferti, breves, vulgo 2-3 cm. longi, passim dense pilosuli ; pedunculus communis vulgo 1 cm. longus ; pedicelli 1-2.3 cm. longi ; bracteae minutae. *Sepala* extra dense pilosula, ovata subacuta vel saepe obtusa rotundata, 1.5-3.5 mm. longa, 1-2 mm. lata. *Corolla* ad 3 cm. diametro, petalis obovatis, 4 majoribus ad 2 mm. unguiculatis cum ungue ad 1.5 cm. longis, 8-9.5 mm. latis, extra in venis pilosulis, quinto saepe multo minore, circiter 8 mm. longo, 5-6 mm. lato. *Antherae* 10 omnes perfectae filamentis brevissimis, fere aequales, 3.5-4.5 mm. longae, dense adpresse pilosulae. *Ovarium* dense adpresse pilosum, 6-7 mm. longum, 1.2-1.5 mm. latum ; stylus curvatus, glabrescens, cum stigmate pilosulo circiter 1 cm. longus ; ovula 12. *Fructus* non visus.

British Guiana : bank of small creek, Camp 12, eight-and-a-half miles east of Kaburi River, Mazaruni River, April 20th, 1926, *B. R. Wood* 877 (type in Herb. Kew.). " Forest tree. Common name, Iriariadan ? (Arawak Dialect) ". On sandy soil in forest, Kaietuk Plateau, Potaro River, 1300 ft., May 1926, *Altson* 548. " A slender tree, 40 ft. high. Calyx green. Corolla yellow." Upper Demerara River, September 1887, *Jenman* 4265.

This is closely allied to *C. adiantifolia* Benth. a species originally collected by Spruce on the Rio Uaupes, and recently recorded by Ducke from various localities at the mouth of the Amazons near Pará.

Macrocentrum vestitum *Sandwith* sp. nov. [Melastomataceae-Sonerileae] ; foliis obovatis pilosis dense foveolatis necnon calycis lobis glanduloso-ciliatis *M. droseroidi* Tr. affinis, sed ab hoc ac ab omnibus speciebus adhuc descriptis habitu facie indumentoque insigniter differt.

Herba humilis, tota pilis ad 2 mm. longis simplicibus ac aliis glanduliferis raris saepe brevioribus immixtis vestita ; caulis simplex vel parce ramosus, decumbens vel arcuato-adscendens, 6-12 cm. longus, radice crassa fibrosa 2-3 mm. diametro. *Folia* paribus satis approximatis, obovata, apice rotundata, in utroque pari saepius valde inaequalia, majora 1.5-3 cm. longa, 1-1.6 cm. lata, minora

saepe fere orbicularia 2-7 mm. longa, 2-5 mm. lata, integra, carnosa, utrinque dense foveolata atque pilis supra commemoratis vestita, senectute ferruginea, oculo nudo saepe fortiter uninervia sed verisimiliter semper trinervia ; petiolus 0.3-1 cm. longus. *Inflorescentia* axillaris ; flores 2-4 in pedunculo communi brevi dispositi ; pedicelli striati, 0.8-2 cm. longi, pilis multo rarioribus saepius glanduliferis praediti. *Calyx* campanulatus, 3 mm. longus atque latus, indumento ei pedicelli simili, apice crenato-lobatus, lobis 4 secus marginem glandulis permultis breviter stipitatis instructis, 1 2 mm. longis, 2.5 mm. latis. *Petala* 4 anguste ovato-oblonga, obtusa, 3 mm. longa, 1.5 mm. lata, apice pilo vel seta glandulifera circiter 0.4 mm. longa praedita. *Stamina* 8 circiter 1.2 mm. infra apicem calycis inserta ; filamenta uninervia 1.2 mm. longa ; anthera ad 1.5 mm. longa, appendice filiformi 1-1.3 mm. longa. *Ovarium* glabrum turbinatum, 1.5 mm. longum, ad 1.3 mm. latum ; stylus cum stigmate circiter 2.6 mm. longus. *Calyx fructifer* campanulatus, incrassatus, costis vel striis 8 e pedicello excurrentibus praeditus, 4 mm. longus, apice 5 mm. latus, capsula inclusa paulo breviore ; semina glabra, laevia, ovoidea vel saepius pyramidata.

British Guiana : Tumatumari Falls, Potaro River, *Jenman* 7781 (type in Herb. Kew.) ; common on shady rocks below the Kaieteur, Potaro River, September-October 1881, *Jenman* 826 ; on rocks in the open, Macreba Falls, Kurupung River, Mazaruni River, August 1925, *Altson* 339 ; *ibid.*, on boulders in shade, August 1925, *Altson* 340. " Corolla in bud red. Peduncle red. Fruit red. Leaves fleshy, pitted."

This curious species has been lying for many years unnamed in the Herbarium at Kew owing to the absence of flowering material. This has now been supplied by Mr. Altson (no. 340, from which the above description was taken) and proves that the plant, as was suspected, belongs to this interesting little genus. The conspicuous gland-tipped hair or bristle at the apex of each of the petals is a remarkable feature of the corolla. The nearest affinity of this species is evidently *M. droseroides*, which grows with it in the same localities, and exhibits a similar anisophylly, a somewhat similar indumentum on the deeply-pitted leaves, as well as a glandular margin to the calyx-lobes ; but the entirely basal foliage and long scapiform inflorescence of *M. droseroides* give it a totally different appearance. These peculiar little plants have never been collected except in the neighbourhood of the bigger falls of British Guiana, and Mr. Altson notes that they always grow within reach of the spray. The Macreba Falls lie at a distance of about eighty-five miles to the north-east of the Kaieteur.

Macrocentrum gesneriaceum *Sandwith* sp. nov. [Melastomataceae-Sonerileae] ; *M. vestito* Sandwith affinis, praesertim foliis acutis margine tantum setoso-pilosis brevius petiolatis, floribus duplo majoribus fere sessilibus, calyce ovarioque angustiore atque longiore, petalis apice nudis insigniter differt.

Herba humilis, decumbens vel arcuato-adscendens, radice fibrosa ad 1.2 mm. diametro ; caulis 8-15 cm. longus, 0.5-1 mm. diametro, obscure tetragonus, angulis tuberculis atque pilis sursum arcuatis instructis ; internodia 0.5-1.5 cm. longa. *Folia* in paribus valde inaequalia, minora mox delapsa ita ut folia alterna esse videantur, majora persistentia elliptica vel obovato-elliptica, acuta, 1-3 cm. longa, 0.5-1.5 cm. lata, integra, carnosa, dense minute foveolata, oculo nudo fortiter uninervia sed juniora evidenter trinervia, faciebus glabris, secus marginem pilis densis plerumque simplicibus sursum arcuatis instructa ; petiolus brevissimus 2 mm. longus, praesertim versus nodum dense pilosus. *Inflorescentia* axillaris ; flores 1-4 de pedunculo communi brevissimo indumento caulis praedito dependentes, brevissime pedicellati vel fere sessiles. *Calyx* fere hypocrateriformis, costis 8 setosis, 5 mm. longus, anguste cylindricus 1 mm. latus, apice subito ad 3 mm. ampliatus, lobato-crenatus, lobis 4 secus marginem glandulis vel tuberculis sessilibus instructis ad 1.2 mm. longis ad 2.5 mm. latis. *Petala* 4 alba, obovato-oblonga, acuta, apice nuda, ad 6.5 mm. longa, ad 3.5 mm. lata. *Stamina* 8 circiter 1 mm. infra apicem calycis inserta ; filamenta 2 mm. longa ; anthera 2.75 mm. longa, appendice filiformi 1.5 mm. longa. *Ovarium* anguste cylindricum, circiter 3 mm. longum, apice paulo ampliatum ad 1 mm. latum ; stylus cum stigmate fere 6.2 mm. longus. *Calyx fructifer* incrassatus, profunde costato-striatus costis setiferis, cylindrico-campanulatus vel obconicus, 8-10 mm. longus, apice 4-6 mm. latus, capsula inclusa paulo breviore ; semina laevia, oblique ovoidea, quam eis *M. vestiti* minus pyramidata.

British Guiana : Mazaruni River ; with *M. droseroides* and *M. vestitum* on the face of sandstone cliffs and on fallen trees, Macreba Falls, Kurupung River, August 1925, *Altson* 358 (type in Herb. Kew). " Corolla white ".

The anisophylly of this species, which has never been discovered before and which exhibits several other characters common to *M. droseroides* and *M. vestitum*, is so extreme that the small members of each pair have fallen in the upper parts of the plant, leaving little or no scar, and the leaves appear to be alternate.

Sipanea micrantha *Sandwith* sp. nov. [Rubiaceae-Rondeletieae] ; affinis *S. biflorae* L. fil., omnibus partibus minoribus, praesertim floribus minimis corollae tubo brevissimo statim distinguenda.

Herba tenuis nodis radicans et parce ramosa, ad 28 cm. longa, fortasse nonnunquam longior, sed saepe multo brevior atque 6-12 cm. longa ; caulis dense adpresse pilosus ; internodia in plantis minoribus 1-2.5 cm. longa, in plantis majoribus ad 5 cm. longa. *Folia* parva, ovata, acuta, basi cuneata, 0.5-1.7 cm. longa, 3-9 mm. lata (in planta typica solum ad 1.1 cm. longa ac ad 6.5 mm. lata), glabra vel nervis sparse pilosa ; petiolus indumento caulis 2-6 mm. longus ; stipulae obsoletae. *Inflorescentia* axillaris biflora, adpresse pilosa, summa axem facile superans, pedunculo communi 1.2-1.8 cm.

longo, pedicello terminali 3-5 mm. longo, laterali breviore ; bracteae subulatae, circiter 1 mm. longae. *Calyx* tubo campanulato brevi, circiter 1 mm. longo atque lato, dense adpresse albo-piloso, apice glandulis rubro-aurantiacis ut in *S. biflora* inter bases dentium instructo ; dentes inaequales, lineari-subulati, ad 2.8 mm. longi, glabrescentes. *Corolla* tubo cylindrico brevissimo 2.5-3 mm. longo, extra glabro, intus superne usque ad faucem piloso ; limbus ad 4.5 mm. diametro, lobis rotundatis vel obovatis ad 2.3 mm. longis, ad 1.75 mm. latis, intus minute pulverulentis. *Stamina* tubo 1-1.2 mm. supra basim inserta, filamentis brevissimis circiter 0.4 mm. longis ; antherae viridescentes, 0.75-1 mm. longae. *Ovarium* glabrum, transverse ellipticum, 0.3 mm. longum, 0.8 mm. latum ; stylus 2-2.5 mm. longus, ramis ad 0.6 mm. longis. *Fructus* ovoideus, pilosus, ad 2.5 mm. longus atque diametro, calycis dentibus persistentibus.

British Guiana : Kamakusa, Mazaruni River, September 1925, *Abraham* 404 (type in Herb. Kew.). Bartica Grove, November 1886, *Jenman* 2416, a more drawn-up form with larger leaves and internodes.

Leiphaimos (§ Euleiphaimos Gilg) **eximia** *Sandwith* sp. nov. [Gentianaceae-Leiphaimeae] ; affinis *L. aphyllae* (Jacq.) Gilg, corollae tubo multo longiore, lobis majoribus speciosis, antheris majoribus connatis, filamentis longioribus differt.

Herba 10-20 cm. alta, caule ut in *L. aphylla* plerumque simplici unifloro. *Folia* bracteaeque squamiformia, 2.5-4 mm. longa, infra medium connata. *Calyx* tubo 4-5 mm. longo, lobis triangulari-subulatis acutis ad 1.75 mm. longis. *Corolla* flavo-aurantiaca, glabra, hypocrateriformis; tubus 4-5 cm. longus, igitur ovario triplo vel quadruplo longior, ad 2 mm. latus, versus limbum ad 4-5 mm. ampliatus ; limbus lobis ovato-lanceolatis acutis, 0.9-1.5 cm. longis, 3-5.5 mm. latis. *Stamina* infra os 4-5 mm. filamentis distinctis 0.5-0.75 mm. longis inserta ; antherae arcte connatae, loculis obtusis inappendiculatis circiter 1.3 mm. longis. *Ovarium* 5-10 mm. longum, 1.5-2.5 mm. latum, glabrum, eglandulosum ; stylus glaber cum stigmate 3-3.8 cm. longus.

British Guiana : in damp shady places under boulders on summit of sandstone escarpment, Kurupung Mountains, Pacaraima Range, 1500 ft., August 1925, *Altson* 373 (type in Herb. Kew.). "A saprophyte on leafmould. Flowers orange-yellow." Bushy edge of Kaieteur Savannah, October 1878, *E. F. im Thurn*. In forests near the Kaieteur Savannah, Potaro River, September-October 1881, *Jenman* 1266.

This has been confused with *L. aphylla* from which it is easily distinguished by the large handsome flowers and the characters of the stamens. One of Sir Everard im Thurn's specimens bears two flowers at the apex of the stem.

LIII.—TROPICAL AFRICAN PLANTS: V.*

J. Hutchinson and J. M. Dalziel.

Chailletiaceae.

Dichapetalum cordifolium *Hutch. et J. M. Dalz.*, sp. nov.; affinis *D. umbellato* Chod., sed foliis petiolatis late oblongo-ellipticis majoribus infra reticulatis differt.

Frutex; ramuli breviter tomentosi. *Folia* late oblongo-elliptica, acuminata, basi cordata, circiter 16 cm. longa et 8–10 cm. lata, infra parce pubescentia et crebre venulosa, nervis lateralibus utrinsecus circiter 8; petioli 1–1·5 cm. longi, molliter tomentosi. *Cymae* pauciflorae, breviter pedunculatae, ubique molliter tomentosae; pedicelli crassi, 0·5 cm. longi. *Sepala* oblonga, 3 mm. longa, extra tomentosa. *Petala* biloba, extra appresse pubescentia.

Nigeria: Southern Provinces; Akure, *Foster* 192.

Dichapetalum Linderi *Hutch. et J. M. Dalz.*, sp. nov.; affinis *D. subauriculato* Engl., sed ramulis floriferis plus minusve pubescentibus, foliis nervis infra setulosis differt.

Frutex parvus; ramuli purpurascentes, mox glabri. *Folia* oblongo-obovata, basi inaequilatere cordata, apice sensim acuminata, 8–15 cm. longa, 3·5–6 cm. lata, nervis lateralibus utrinsecus circiter 5 infra setulosis; petioli 3 mm. longi, tomentelli; stipulae lineares, 8 mm. longae. *Flores* flavescentes, glomerati, sessiles, circiter 6 mm. longi. *Sepala* oblonga, dense pubescentia, 2·5 mm. longa. *Petala* biloba, glabra.

Liberia: Suen, Nov., *Linder* 1407.

Dichapetalum Rowlandii *Hutch. et J. M. Dalz.*, sp. nov.; affinis *D. Thomsonii* Engl., sed costa supra breviter pubescentia, foliis elliptico-obovatis basi cuneatis, floribus subsessilibus differt.—*D. Bocageanum* A. Chev. Explor. Bot. Afr. Occid. Franç. 119, non Engl.

Ramuli breviter tomentosi. *Folia* elliptico-obovata, obtuse acuminata et mucronata, basi cuneata, 10–20 cm. longa, 5–10 cm. lata, infra leviter pubescentia, nervis lateralibus utrinsecus 6; petioli usque ad 0·5 cm. longi, tomentelli. *Flores* axillares, glomerati, subsessiles. *Sepala* anguste oblonga, 1·5 mm. longa, extra tomentosa. *Petala* bilobata, glabra.

Dahomey: Porto Novo, Mar., *Chevalier* 23332. Nigeria: Southern Provinces; Western Lagos, *Rowland* (type).

Dichapetalum chrysobalanoides *Hutch. et J. M. Dalz.*, sp. nov.; affinis *D. toxicario* Engl., sed pedunculis inferioribus petiolo adnatis, foliis minoribus differt.

Ramuli flexuosi, glabri. *Folia* oblongo-elliptica, abrupte et breviter acuminata, basi breviter cuneata, 4–8 cm. longa, 2–4 cm.

*Continued from *K.B.* 1928, p. 301.

lata, glabra, supra nitida, nervis lateralibus utrinsecus circiter 6; petioli usque ad 0·6 cm. longi. *Flores* minimi, laxe cymosi, pedunculo petiolo adnato. *Sepala* extra tomentosa. *Petala* biloba.

Sierra Leone: Magbile, Dec., *Thomas* 6016, 6019, 6110, 6119, 6125, 6145; without locality, *Scott Elliot* (type).

CAESALPINIACEAE.

Cynometra leonensis *Hutch. et J. M. Dalz.*, sp. nov.; affinis *C. Hankei* Harms, sed foliolis circiter 6-jugis infra glabris differt.

Arbor magna; ramuli flexuosi, leviter pubescentes. *Folia* circiter 8 cm. longa; foliola circiter 6-juga, oblique-oblonga, apice truncata vel leviter emarginata, 2–3 cm. longa, 1–1·5 cm. lata, glabra. *Flores* breviter paniculati; pedicelli 4–5 mm. longi, puberuli. *Sepala* suborbicularia, 4 mm. longa, glabra. *Petala* obovata, 3·5 mm. longa.

Sierra Leone: Yandahun, *Unwin & Smythe* 52; Bandama, Mar., *Aylmer* 576; Kenema, Mar., *Aylmer* 136 (type).

Cynometra ananta *Hutch. et J. M. Dalz.*, sp. nov.; affinis *C. Vogelii* Hook f., sed foliolis acuminatis late falcatis, floribus breviter cymosis differt.

Arbor magna, ligno duro rubro; ramuli glabri. *Foliola* 1-juga, late falcata, acuminata, 6–10 cm. longa, 2–4 cm. lata, glabra, nervis reticulatis; petioluli 3–4 mm. longi. *Flores* breviter cymosi, conferti; pedicelli brevissimi, fulvo-pubescentes; bracteae parvae. *Sepala* obovato-orbicularia, 3–4 mm. longa. *Petala* 5. *Fructus* late oblongus, inaequaliter triangulari-apiculatus, circiter 9 cm. longus et 5 cm. latus, leviter nervosus.

Gold Coast: Ankobra River Basin, Nov., *Chipp* 11 (type); Dunkwa, *Vigne* 875.

Hymenostegia Bakerianum *Hutch. et J. M. Dalz.*, sp. nov.; foliolis 8–10-jugis, racemis densifloris alabastro bracteis magnis coriaceis striatis tectis, bracteolis lineari-oblanceolatis magnis, calycis lobis venosis tinctis distincta.

Arbor; ramuli tomentelli. *Folia* usque ad 20 cm. longa; foliola circiter 8–10-juga, oblonga, obtuse acuminata, glabra, nervis lateralibus numerosis reticulatis; rhachis breviter pubescens, subteres. *Racemi* densiflori, 7–8 cm. longi; bracteae coriaceae, striatae, usque ad 3 cm. longae; bracteolae lineari-oblanceolatae, circiter 1 cm. longae, extra pilosae. *Calycis lobi* obovati, tincti, venosi, 1 cm. longi, 6–7 mm. lati. *Petala* lineari-oblanceolata. *Stamina* numerosa.

Nigeria: Southern Provinces; Oban, *Talbot* 1567.

Hymenostegia gracilipes *Hutch. et J. M. Dalz.*, sp. nov.; foliolis 4-jugis, racemis laxifloris, bracteis mox deciduis, bracteolis late oblongis distincta.

Arbor; ramuli flexuosi, glabri. *Folia* circiter 10 cm. longa; foliola 4–juga, jugis subaequalibus, oblique oblongo-oblanceolata, triangulari-acuminata, 4–8 cm. longa, 2–3·5 cm. lata, glabra, nervis lateralibus numerosis; rhachis exalatus. *Racemi* terminales, laxiflori, foliis breviores; axis glaber; pedicelli graciles, 2·5 cm. longi; bracteolae oblongae, tenues, circiter 1 cm. longae, petaloideae. *Calycis lobi* anguste ovati, 6 mm. longi. *Petala* 3, inaequalia, multo reducta. *Stamina* 10, libera.

Gold Coast: Sa, on the Bonsa River, Aug., *Vigne* 978.

Tessmannia baikieaoides *Hutch. et J. M. Dalz.*, sp. nov.; affinis *T. africanae* Harms, sed foliolis longe acuminatis, sepalis extra tomentellis differt.

Arbor; ramuli breviter puberuli. *Foliola* alterna, circiter 3-juga, oblique obovato-oblanceolata, obtuse acuminata, basi cuneata, 5–7 cm. longa, 2–3 cm. lata, costa media puberula excepta glabra, nervis lateralibus numerosis; petioluli brevissimi. *Flores* pauci, alabastro circiter 1·5 cm. longi; pedicelli usque ad 2 cm. longi, tomentelli. *Sepala* oblongo-lanceolata, acuta, tomentella. *Petala* juniora tantum visa, costa hirsuta. *Ovarium* dense villosum, stylo alabastro spiraliter contorto.

Sierra Leone: York Pass, Dec., *Lane-Poole* 137.

Talbotiella Gentii *Hutch. et Greenway*, sp. nov.; a *T. eketensi* Bak. f., foliolis circiter 6-jugis majoribus apice rotundatis differt.

Arbor; ramuli minute puberuli. *Foliola* circiter 6-juga, opposita, oblique oblonga, apice rotundata, basi unilateraliter auriculata, circiter 2 cm. longa et 1 cm. lata, glabra, venulosa. *Racemi* axillares, circiter 3 cm. longi, pilosi, basi perulis coriaceis striatis instructi; pedicelli 1 cm. longi, laxe pubescentes. *Sepala* oblongo-elliptica, 6–7 mm. longa, glabra. *Stamina* 8–9. *Ovarium* stipitatum, villosum. *Fructus* planus, late obovatus, leviter rostratus, circiter 4 cm. longus, oblique nervosus.

Gold Coast: North Scarp, Kwahu, Dec., *Gent* 184 (type); Agogo, damp places, *Irvine* 957.

Daniellia Oliveri *Hutch. et J. M. Dalz.*, comb. nov. *Paradaniellia Oliveri* Rolfe in Kew Bull. 1912: 96. *Daniellia thurifera* A. Chev. Explor. Bot. Afr. Occid. Franç. 231, non Bennett.

Widely spread from the French Sudan through Northern Nigeria and the Cameroons to the Eastern Sudan.

Daniellia pubescens *Hutch. et J. M. Dalz.*, sp. nov.; rhachi et costa foliolorum infra molliter pubescenti, foliolis circiter 5–6-jugis oblongo-ellipticis basi inaequilateralibus et subcordatis apice breviter acuminatis 7–13 cm. longis 3–5 cm. latis nervis lateralibus numerosis subparallelis infra crebre reticulatis, calyce extra glabro lobis late ellipticis 1·3 cm. longis, seminibus complanatis oblongo-ellipticis 3 cm. longis distincta.

Nigeria: Southern Provinces; Lagos Colony, *Moloney*.

LIV.—MISCELLANEOUS NOTES.

The following appointments have been made by the Secretary of State for the Colonies :—Mr. O. J. Voelcker, B.A., Mr. G. N. K. Turnbull, Mr. J. H. Palmer, B.A., and Mr. E. W. Leach, B.Sc., Superintendents, Agricultural Department, Nigeria ; Mr. G. Cowan, Superintendent, Agricultural Department, Gold Coast ; Mr. H. P. Smart, B.Sc., Agricultural Officer, British Honduras ; Mr. E. E. Martyn, B.A., Botanist and Mycologist, British Guiana ; Mr. C. W. J. Line, Deputy Director of Agriculture, Gambia, to be Assistant Superintendent, Agricultural Department, Gold Coast (*K.B.* 1924, p. 27).

Charles Curtis.—We regret to record the death, on 16th August, 1928, of Mr. Charles Curtis, who was for many years Superintendent of the Botanic Gardens at Penang. Between 1878 and 1884 Mr. Curtis made several plant-collecting expeditions for Messrs. James Veitch and Sons, the first being to Mauritius and Madagascar. In 1880 he was sent to Borneo, Sumatra, Java, and the Moluccas. The special object of this journey was to collect specimens of *Nepenthes Northiana*, a plant which had been made known through a drawing by Miss North, now in the North Gallery at Kew. In this quest he was successful.

Mr. Curtis sent home large collections of plants, including many new species. Among the latter are *Cypripedium Curtisii*, *Nepenthes Curtisii*, *Medinilla Curtisii*, *Rhododendron multicolor* var. *Curtisii*.

Through his botanical activities Mr. Curtis was brought into close touch with Kew, and it was through the recommendation of Kew that he received the appointment to Penang mentioned above. This was in 1884, and he held the post until his retirement in 1903. While at Penang, under Mr. H. N. Ridley, he assisted in carrying out some of the earliest experiments in the tapping of Para rubber.

Henry Alexander Wickham.—The death of Sir Henry Wickham, on September 28th, brings to an end a career noteworthy in the annals of industry. The part played by Wickham in the foundation of the plantation industry is well known and need not be recounted here. It received public recognition in 1911 when the Rubber Growers' Association of London and the Rubber Planters' Association of Ceylon and Malaya presented him with 1,000 guineas and an annuity, while in 1920 he received the honour of knighthood. Rarely, if ever, can an individual have witnessed, as Wickham did, the results of his early efforts develop within his lifetime into an enterprise of such magnitude as the rubber industry.

On the type specimen of Viola confusa.—The description of *Viola confusa* Champ. ex Bentham is to be found in Bentham's "Florula Hongkongensis" published in Hooker's Kew Journal of Botany iii. pp. 260–261 (1851).

The sheet with the type specimens of this species is preserved in the Kew Herbarium and consists of two flowering plants and three fruiting specimens. The label runs " 352 *Viola inconspicua* (Bl.) ? Hongkong." Added to this, in another handwriting, is the name " *V. confusa* Champ." It was cited by Hemsley in Index Florae Sinensis as *V. serpens* Wall.

The sheet in question actually, however, consists of two species, namely, *V. inconspicua* Bl. (the three lower fruiting specimens), and two flowering plants (the upper ones). The description of *Viola confusa* is for the most part concerned with the latter, at all events in so far as flowering plants come into consideration.

The following passages in the published description of *V. confusa* refer to the three fruiting individuals of *V. inconspicua*. " In specimenibus flores fertiles apetalos . . . pedunculis petiolis breviore." " Capsula elliptico-trigona." But the description as a whole obviously refers to the flowering specimens.

V. confusa Champ. is a species with an eastern Asiatic distribution and which had been described by Hayata under the name *V. stenocentra*. I have also myself published it as *V. philippica* subsp. *malesica*. As *V. philippica* Cav. is an uncertain species the name *V. confusa* Champ. must be given priority.

I would also draw attention to the fact that Bentham's description of *V. confusa* in " Flora Hongkongensis " (1861), p. 20, refers entirely to our plant and excludes *V. inconspicua* Bl.

W. BECKER.

Setaria verticillata as a preventive of rats.—The following interesting note, on the method adopted by the Wasakuma tribe of the Shinyanga District to protect their corn-stores from rats, has been communicated to us by the Director of Agriculture, Tanganyika Territory, who received it from the District Agricultural Officer, Shinyanga.

" The native food stuffs such as millet and maize are stored in large Lindos or circular grain stores made from mtama stalks or long grass, plastered with cow-dung, and built either inside the houses or under a separate roof. The Lindos are raised 2 to 3 ft. from the ground on stones and vary in size according to the wealth in grain of the owner.

Over the top of the grain in the open months of the Lindos, the Wasakuma place the dried spikes of a grass called by them *Makalamatta*, or in Swahili, *Marramatta*. The bristly spikes wrap themselves around the fur of the rats and make themselves so unpleasant to the rats that they do not attempt to get at the grain below."

Specimens of this grass accompanying the above note have been determined as *Setaria verticillata* P. Beauv. It is the reversedly barbed bristles which become rigid at maturity that serve to fix the spikes to the fur of the rats.

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